



UNIVERSITI
MALAYSIA
KELANTAN



CRI 2021
CARNIVAL OF RESEARCH AND INNOVATION
VIRTUAL INTERNATIONAL EDITION

e-PROCEEDING

CARNIVAL OF
RESEARCH & INNOVATION
(CRI 2021)
VIRTUAL INTERNATIONAL EDITION

In conjunction with



INTELLIGENT 2021
POLITEKNIK KOTA BHARU

I N T E R N A T I O N A L
VIRTUAL INNOVATION CHALLENGE
(INTELLIGENT2021)

&



CREATIVE INNOVATION CARNIVAL
(CIC) 2021

20 – 21 SEPTEMBER 2021
UNIVERSITI MALAYSIA KELANTAN, MALAYSIA

CHIEF EDITOR: NUR HAFEZAH HUSSEIN

The background of the entire page is a light gray circuit board pattern with various nodes and connecting lines. At the bottom of the page, there is a more detailed and colorful circuit diagram featuring purple, red, and orange components.

e-PROCEEDING

CARNIVAL OF

RESEARCH & INNOVATION

(CRI 2021)

VIRTUAL INTERNATIONAL EDITION



CRI 2021

CARNIVAL OF RESEARCH AND INNOVATION
VIRTUAL INTERNATIONAL EDITION

e-PROCEEDING

CARNIVAL OF
RESEARCH & INNOVATION
(CRI 2021)
VIRTUAL INTERNATIONAL EDITION

In conjunction with



INTELLIGENT 2021
POLITEKNIK KOTA BHARU

I N T E R N A T I O N A L
VIRTUAL INNOVATION CHALLENGE
(INTELLIGENT2021)

&



CREATIVE INNOVATION CARNIVAL
(CIC) 2021

© Research Management Innovation Centre, 2021

All right reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or any means, electronics, mechanical, photocopying, recording or otherwise, without prior permission, in writing, from the Research Management Innovation Centre, Deputy Vice Chancellor (Research & Innovation) Office, Universiti Malaysia Kelantan.

eISBN

978-967-2912-89-7

E-PROCEEDING OF CARNIVAL RESEARCH & INNOVATION (CRI2021)
VIRTUAL INTERNATIONAL EDITION

DESIGNER

Muhammad Najibul Muthiie bin Che Ya'acob

CHIEF EDITOR

Nur Hafezah binti Hussein

EDITORS

Tenh Hock Kuan
Anuar bin Mohd Yusof
Mohammad Syukran bin Kamal Ruzzaman
Liyana binti Ahmad Afip
Nor Hazwani Munirah binti Lateh
Noor Izma binti Ab. Ghani
Nik Azida binti Abd Ghani
Wanly a/p Eh Keon
Nor Ashikin binti Mazlan
Nor Abidah binti Abdul Hamid
Tan Tse Guan

PUBLISHED BY

Research Management Innovation Centre (RMIC)
Deputy Vice Chancellor (Research & Innovation) Office,
Universiti Malaysia Kelantan,
16300, Bachok
Kelantan, Malaysia.

ORGANISED BY

Intellectual Property and Commercialisation Division
Research Management and Innovation Centre
Universiti Malaysia Kelantan

CO-ORGANISED BY

Faculty of
Creative Technology and Heritage

Faculty of
Language Studies and Human Development


POLITEKNIK
MALAYSIA
KOTA BHARU
Politeknik Kota Bharu, Malaysia

SUPPORTED BY

NATIONAL
STEM
ASSOCIATION
National STEM Association

TABLE OF CONTENTS

FOREWORD (BY THE VICE CHANCELLOR UNIVERSITI MALAYSIA KELANTAN	i
FOREWORD BY THE SENIOR DIRECTOR OF RESEARCH MANAGEMENT AND INNOVATION CENTRE, UNIVERSITI MALAYSIA KELANTAN	ii
FOREWORD BY THE DIRECTOR OF POLITEKNIK KOTA BHARU	iii
PREFACE BY CHIEF EDITOR	iv
ORGANIZING COMMITTEE	v
PART 1: SCIENCE & TECHNOLOGY	1
1 QN-OptiCal: A ROBUST CALCULATOR USING QUASI-NEWTON APPROACH FOR SOLVING MATHEMATICAL EQUATION	2
<i>Azfi Zaidi Mohammad Sofi, Sarizam Mamat, Nurul Akmar Che Zaudin, Nor Hakimin Abdullah, An'amt Mohamed Noor, Andi Hermawan, Abdul Hafidz Bin Yusoff, Sharizal Ahmad Sobri, Teo Pao Ter, Mohd Asrul Hery Bin Ibrahim, Khairul Nizar Syazwan, Hasyiya Karimah Adli, Arlina Ali, Muhammad Iqbal Ahmad, Mohamad Bashree Abu Bakar, Hafiz Mohd Hanafi, Khirulnizam Rahman & Nur Muizz Mohamed</i>	
2 THE 3D-BES	4
<i>Jamaliah Mohamad Sopi, Haryati Binti Ismail, & Nor Asma Binti Mamat</i>	
3 MEASUREMENT OF MILITARY COMBAT READINESS USING INTANGIBLE HUMAN DIMENSION FACTORS	6
<i>S. Inderjit, Hasan Al-Banna Mohamed, Abdul Rahman Abdul Razak Shaik, Safar Yaacob, Ummul Fahri Abdul Rauf, Jessica Ong Hai Liaw, Siti Najwa Zainuddin, Kwong Fook Wen, & Wong Wai Loong</i>	
4 SMART 3-WHEEL BIKE "EMPOWER DISABLED ENTREPRENEURS WITH TECHNOLOGY"	9
<i>Nurnaddia Nordin & Nurhaiza Nordin</i>	
5 PUBLIC MOBILITY MONITORING USING COMPUTER VISION AND GIS FOR MEASURING PANDEMIC SOCIAL DISTANCING IN EFFECTIVE AND SCALABLE MANNER	11
<i>Arham Muchtar Achmad Bahar & Wani Sofia Udin</i>	
6 BOOKTABLELA APPLICATION	13
<i>Navanitha Moorthy & K.S. Savita</i>	
7 SMART FERTILIZATION MANAGEMENT FOR OIL PALM TREE BASED ON IoT AND DEEP LEARNING	15
<i>Shaparas Daliman, Nur Ain Najwa Mohd Adib, Nazahatul Anis Amaludin, Noor Janatun Naim Jemali, Aweng Eh Rak, & Nordiana Abd Aziz</i>	
8 DEVELOPMENT OF INTEGRATED SCHEDULED WASTE MANAGEMENT SYSTEM FOR EDUCATIONAL SECTOR	17
<i>Norhidayu Noruddin, Ahmad Rasdan Ismail, Wan Azlee Wan Abdullah, Noor Syuhadah Subki, Siti Suhaila Mohd Nawawi, Mohd Khalid Ab Kadir @ Musa, Asma Salsabila Che Shaffie, & Mohamad Fazli Muhamad @ Che Abas</i>	
9 ISLAMIC HFitTracker: ISLAMIC HEALTH AND FITNESS TRACKER MOBILE APPLICATION FOR HEALTHY LIFESTYLES	18
<i>Mohd Fadil Mohd Yusof, Siti Salina Saidin, Nurul Hafizah Mohd Yasin, Siti Fatimah Ab. Ghaffar, & Nur Farihin & Abd Hadi Khan</i>	
10 A MULTI-PLATFORM AND LOW-COST NETWORK ATTACHED STORAGE FOR IOT APPLICATIONS	20
<i>Nurul Azma Zakaria, Zaheera Zainal Abidin, & Muhammad Iqbal Mohamad Zaimi</i>	

11	TECHNOLOGY IMPROVEMENT OF MINI SMART ARTIFICIAL INCUBATOR SYSTEM (SMART FIN-Tech) FOR FISH EGG	22
	<i>Suniza Anis Mohamad Sukri, Zulhisyam Abdul Kari@Abdullah, Hasnita Che Harun, Zuharlida Tuan Harith, & Mohd Fareezman Zamzuri</i>	
12	LOCKER SAFETY ALARM WITH BLYNK NOTIFICATION	24
	<i>Mohamed Faris Farhan bin Mohamed Rohi, & Zainuddin bin Omar</i>	
13	ZoN- ELECTRONIC SEMICONDUCTOR DEVICES	26
	<i>Arlina Binti Ali, Hidayani Binti Jaafar, Teo Pao Ter, Sarizam Binti Mamat, Norfadhilah Binti Ibrahim, Mohamad Najmi Bin Masri, Mohamad Bashree Bin Abu Bakar, An'Amt Bin Mohamed Noor, & Azfi Zaidi Bin Mohammad Sofi</i>	
14	VEHICLE ALERT SYSTEM	29
	<i>Ts. Mahayudin B. Saad, & Muhammad Danish Bin Syujahuddin Ganeson</i>	
15	IoT SOLAR REFRIGERATOR	33
	<i>Nur Sahira binti Ilias, Nur Filzah binti Mohd Fauzey, & Muhamad Tarmizie bin Ismail</i>	
16	WIRELESS HUMANOID ROBOT USING MICROCONTROLLER "ESP32" VIA BLYNK	35
	<i>Mohd Faizal bin Mustapha, Muhammad Arif bin Zainudi, & Wan Muhammad Afnan bin Wan Azli</i>	
17	SMART HOME AUTOMATION USING BLYNK	38
	<i>Muhammad Amir Syafiq bin Kamalruzzaman & Rosmaria binti Ariffin</i>	
18	IoT-BASED NON-INVASIVE BLOOD GLUCOSE MONITORING SYSTEM	40
	<i>Lim Shau, Ts. Dr. Siti Zuraidah Ibrahim, Ts. Dr. Ku Nurul Fazira Ku Azir, & Assoc. Prof. Dr. Ruzelita Ngadiran</i>	
19	RISK MITIGATION FOR SOFTWARE ANTI-AGEING DURING ANALYSIS OF CHANGES IN SOFTWARE MAINTENANCE	42
	<i>Noraini Che Pa , Thamaratul Izzah Binti Azman, Yusmadi Yah Jusoh, & Rozi Nor Haizan Nor</i>	
20	HUMAN ELEPHANT CONFLICT RECORD (HECoR) APP	44
	<i>Hazizi Husain, Kamarul Ariffin Kambali@Hambali, & Norashikin Fauzi</i>	
21	INTELLIGENT SPECTACLE FOR BLIND PERSON	46
	<i>Anuar Bin Mohamed Kassim, Muhammad Herman Bin Jamaluddin, Arman Hadi Bin Azahar, Mohd Rusdy Bin Yaacob, Sivarao A/L Subramonian, Albert Feisal @ Muhd Feisal Bin Ismail, Md Nazri Bin Othman, Muhammad Fahmi Bin Miskon, Ahmad Zaki Bin Shukor, Muhammad Mustaqiim Bin Roslan, Sahrul Bin Sahak, Nurul Nadia Binti Ayob, Muhammad As Shakirin Bin Abdul Aziz, & Awangku Khairul Ridzwan Bin Awangku Jaya</i>	
22	IoT BASED INTELLIGENT FIRE ALARM SYSTEM (I-FAST)	49
	<i>Anuar Bin Mohamed Kassim, Muhammad Mustaqiim Bin Roslan, Muhammad As Shakirin Bin Abdul Aziz, Muhammad Muslim Bin Mohd Rashidin, Muhamad Afiq Shahmi Bin Shamsul Izran¹, Sahrul Bin Sahak, Muhammad Malek Faizal Bin Mohammad Zaini, & Awangku Khairul Ridzwan Bin Awangku Jaya</i>	
23	SIMPLE COIN BANK USING ESP32	52
	<i>Noraida binti Yusoff, Hirni binti Rashid, Ajmal Danish bin Mohd Zemri, & Muhamad Akmal Aiman bin Mohd Azlan</i>	
24	IoT-BASED DOOR ACCESS CONTROL USING FACE RECOGNITION	54
	<i>Muhammad Afiq Bin Aznan, Ts. Dr. Siti Zuraidah Ibrahim, Ts. Dr. Ku Nurul Fazira Ku Azir, & Assoc. Prof. Dr. Ruzelita Ngadiran</i>	
25	LOW-COST AUTOMATIC CAT FEEDER	56
	<i>Nawi bin Berahim, Ahmad Irfan bin Kamaruddin, & Muhammad Afiq bin Na Amran</i>	
26	REGENERATIVE BRAKING SYSTEM FOR ELECTRIC VEHICLES	58
	<i>Mohammad Muktafi Ali Khan, Mohammad Muqtada Ali Khan, Hafzan</i>	

	<i>Eva Manosr, Elvaene James, Zaitul Zahira Binti Ghali @ Ghazali, & Sarizam bin Mamat</i>	
27	HEALTH EDUCATION MODULE (HEM) FOR THE PREVENTION OF RESPIRATORY ILLNESSES DURING HAJJ AND UMRAH <i>Mohammed Dauda Goni , Aisha Abubakar Baaba, & Ibrahim Abdul Azeez Okene</i>	61
28	TOWARDS AQUACULTURE PRECISION FARMING: IoT BIG DATA ANALYTICS USING MACHINE LEARNING <i>Khalifa Chekima & Brahim Chekima</i>	63
29	IoT SMART GUIDANCE PARKING SEARCH SYSTEM <i>Iszaidy bin Ismail, Nur Farhan Kahar, Ruzelita Ngadiran, & Mohamad Hanif Md Saad</i>	66
30	EARTHCARE APPS DEVICE <i>Nur Sajida binti Peduka, Zakiyah binti Taharim, Nur Izzah Amalia binti Hashim, Nur Bashiratul Khalidah binti Ismail Hisyam, Hazyati binti Hashim, & Fadhilahanim Aryani binti Abdullah</i>	68
31	APC-BUS: AUTOMATED PASSENGER COUNTING FOR INTELLIGENT BUS TRANSPORTATION SYSTEM <i>Aimi Salihah Abdul Nasir, Muhammad Rizal Farhan Shaik Osman, Muhammad Izuan Fahmi Romli, & Marni Azira Markom</i>	70
32	SMART INTERNET-OF-MEDICAL WEARABLE WATCH FOR EARLIER SYMPTOMS DETECTION, MONITORING AND TRACKING OF COVID-19 PATIENTS <i>Naimah Yaakob, Nik Adilah Hanin Zahri, Siti Hajar Bt Abdul Rahman, Riza Nur Arissha Bt Mohd Sabri, Devendran A/L Ramesparan, & Siti Nur Aisyah Bt Azara'ai, Mahathir Almashor</i>	72
33	VISION BASED SMART GRIPPER FOR MATERIAL HANDLING USING INTERNET OF THINGS <i>Hasimah Ali, Muhammad Irfan Zainur, Tan Yin Suan, & Mohamed Elshaikh</i>	74
34	CUSTOMIZED RAINFALL COLLECTOR FOR ISOTOPE ANALYSIS (²H, ¹⁸O, TRITIUM) <i>Roslanzairi Mostapa, Kamarudin Samuding, Mohammad Muqtada Ali Khan, Zakiyah Ainul Kamal, Hafzan Eva Manosor, Nor Shahida Binti Shafiee @ Ismail, & Aweng A/L Eh Rak</i>	76
35	SUPRIMA S5 <i>Mohd.Zulkafli Bin Mohamed, Tengku Azmie Bin Raja Hassan, Muhamad Shah Rul Bin Kamaruddin, Ahmad Suhaimi Bin Arshad, & Wan Amiruddin Bin Wan Mustapha</i>	78
36	SCIENTIFIC WRITING PAPER MANAGEMENT INNOVATION "I-REVIEW" <i>Hasanah Binti Safein @ Shafie, Ira Fazlin Bin Mohd Fauzi, Muhammad Daniel Nafis Bin Ahmad, Muhammad Yahya Bin Mat Rashid, & Wan Mohamad Fikri Bin Wan Shaharuddin</i>	80
37	HUMAN INTELLIGENCE PERFORMANCE PREDICTION BASED ON AI METHODS <i>Raja Suzana Raja Kasim, Ghous Bakhsh Narejo, Zulazli Hashim, Nurul Afiqah Zulazli, & Wan Nor Munirah Ariffin</i>	82
38	ARTIFICIAL INTELLIGENCE SYSTEM AND METHOD FOR SUSTAINABLE SOCIAL FINANCE DATA PREDICTION <i>Raja Suzana Raja Kasim, Ghous Bakhsh Narejo, Zulazli Hashim, Nurul Afiqah Zulazli, & Wan Nor Munirah Ariffin</i>	85
39	COMPACT RECIRCULATING AQUACULTURE SYSTEM (CORALS): ASIAN CLAM SAVIOUR <i>Zharif Ramli, Aweng Eh Rak, & Lee Seong Wei</i>	88
40	RIZBRUNANA: ADVANCES IN HIGH---FIBRE BISCUIT USING BROWN RICE AND BANANA PEEL <i>Nurul Hafizah Mohd Yasin, Derweanna Bah Simpong, Nur Farihin Abd Hadi Khan, & Mazne Ibrahim</i>	90

41	TERMICIDE: ONE DROP SOLUTION TO REPEL HOUSEHOLD PEST TERMITES <i>Suganthi Appalasamy, Nivaarani Arumugam, Alia Diyana Mohamed Hassim, Boon Jia Geng, & Jayaraj Vijaya Kumaran</i>	92
42	SPATIAL PREDICTION FOR AMBIENT PARTICULATE POLLUTION USING SPATAP MODEL <i>Siti Hajar Ya'acob, Siti Aisyah Nawawi, Noor Syuhadah Subki, Norrimi Rosaida Awang, Shaparas Daliman, & Muhammad Ikram A. Wahab</i>	94
43	DESIGN DEVELOPMENT OF WASTE COOKING OIL SMART FILTRATION BOX <i>Asriana Ibrahim, Rafiq Hilmi Alias, Mohd Hakim Naquuddin Abdul Kadir, Mohd Hafidzal Mohd Hanafi, & Nurul Hanim Razak</i>	96
44	ASTAX-FEED <i>Zuharlida Tuan Harith, Suniza Sukri, Nik Nur Azwanida Zakaria, Fatin Nursabriena Mohd Sabir, & Fatin Syuhada Remlee</i>	98
45	PINE-COOKIES <i>Ho Pei Zheng, Zuharlida Tuan Harith, & Nik Nur Azwanida Zakaria</i>	100
46	LA PANCA: THE FURNITURE FOR THE BOTTOM BILLION <i>Azli Abdullah, Nik Nurul Hana Hanafi, Siti Aisyah Muhammad, Najah Md Alwi, Nor Hafizah Anuar, Nuzul Haqimi Muhammad, Mhd Hafiz Karami Mhd Zain, Muhammad Rizal Khairuddin, Juliza Mohamad, & Yasmin Mohd Faudzi</i>	102
47	SONATA: MOBILISED ARCHITECTONIC STREET FURNITURE WITH MULTI-TRANSFORMATION <i>Siti Aisyah Muhammad, Nik Nurul Hana Nik Hanafi, Juliza Mohamad, Najah Md Alwi, & Nor Hafizah Anuar</i>	104
48	GINOC: EDIBLE FOOD DYE <i>Shamsul Muhamad & Saliza Anida Salleh</i>	106
49	THE INVENTION OF FISH FRY MOBILE, AUTOMATIC COUNTER (FRYMAC) USING ARDUINO UNO <i>Nur Aina Lyana Mohamad Ali, Nazrin Nazari, Norhaida Musri, & Nik Muhammad Farhan Nik Mohd Sani</i>	108
50	GUAJAVA – A NUTRITIONAL PINK GUAVA POMACE POWDER <i>Khomaizon Abdul Kadir Pahirulzaman & Fazilawati Shaari, Nurhanan Abdul Rahman</i>	110
51	PRECISE FERTILIZATION WITH DRONE-BASED TECHNOLOGY <i>Muhammad Nurfaiz Abd. Kharim, Aimrun Wayak, Abdul Rashid Mohamed Shariff, Ahmad Fikri Abdullah</i>	112
52	BIODEGRADTION OF WASTE COOKING OIL, ORGANIC MATERIAL AND PLA-FILAMEN MIXTURE <i>Mohd Hafidzal Mohd Hanafi, Anis Ainaa Omar, Ainul Syakirah Md Saffie, Nurul Hanim Haji Razak, & Asriana Ibrahim</i>	114
53	VSOL- INNOVATIVE METHOD TO DETERMINE ULTRA TRACE LEVELS OF PESTICIDES IN FRUITS <i>Krishna Veni Veloo</i>	116
54	OLEOPHILIC POLYMER WASTE – OIL SOLIDIFIER (OPWOS) FOR USED COOKING OIL (UCO) <i>Nurul Hanim Razak, Mohd Hafidzal Mohd Hanafi, Asriana Ibrahim, Nurul Afwa Ab Razak, & Norlina Mohamad Norani</i>	117
55	BOTANICAL REPELLENTS AGAINST SNAIL (ACHATINA FULICA) <i>Tengku Halimatun Sa'adiyah Binti T Abu Bakar, Aionon Najihah Binti Abd Rahman, Jeffry Anak Tasek, Tengku Halimatun Sa'adiyah Binti T Abu Bakar, Suhana Binti Zakaria, Maryana Binti Mohamad Nor, Norhafizah Md Zin, & Raja Ili Airina Raja Khalif</i>	120
56	MULBERRY LEAVES CHIPS <i>Tengku Halimatun Sa'adiyah Binti T Abu Bakar, Mohamad Syahid Farhan Bin Mohd Zaki, Nurul Hasanah Binti Ibrahim, Hanis Syazwani Binti Haron, Mohamad Nabil Bin Razali, Maryana Mohamad Nor, Suhana Zakaria &</i>	123

	<i>Siti Nuurul Huda Binti Mohammad Azmin</i>	
57	SMART CHAMBER FOR PRE-ACCLIMATIZED TISSUE CULTURE BANANA PLANTLETS	125
	<i>Suhana Zakaria, Tengku Halimatun Saa'diah T Abu Bakar, Maryana Mohamad Nor, Fatimah Kayat, Raja Ili Airina Raja Khalif, & Muhammad Irfan Hakim Azmi</i>	
58	SCREENING AND TRIAGE CUBICLE (S.A.T CUBE) FOR COVID-19	127
	<i>Mhd Hafiz Karami Mhd Zain, Wan Azlina Wan Ismail, Najah Md Alwi, Norwina Mohd Nawawi, Wan Pauzi Wan Ibrahim, Azirawati Ismail, & Mohd Zurairie Mohd Zubir</i>	
59	PREMIUM TMR: ALL-IN-ONE FEED FOR LAMBS	129
	<i>Nor Dini Rusli, Mira Panadi, Khairiyah Mat, Hasnita Che Harun, Mohd Mahmud, Syed Muhammad Al-Amsyar Syed Abd. Kadir, Mohamad Khairi Mohd Zainol, & Zamzahaila Mohd Zin</i>	
60	FUELLING FUTURE TREASURE: COMMUNITY-BASED E-WASTE RECYCLING MODEL	131
	<i>Marieanne Christie Leong, Aweng Eh Rak, Suganthi Appalasamy, Amal Najihah Muhamad Nor, Nur Aqilah Azmi, Jayaraj Vijaya Kumaran, Wong Hie Ling, Muhammad Firdaus Abdul Karim, & Robin Sebolino</i>	
61	DEVELOPMENT OF STRAW MUSHROOM (VOLVARIELLA VOLVACEA) FLOUR AND ITSAPPLICATION IN BAKING PRODUCT	134
	<i>Saw Wei Xian & Noor Hafizoh Binti Saidan</i>	
62	A CASE STUDY – IMPACT OF COVID-19 ON LIVESTOCK FARMERS IN KELANTAN	137
	<i>Nur Syuhada Sazali, Mohammad Mijanur Rahman, Khairiyah Mat, Nor Dini binti Rosli, & Raja Ili Airina binti Raja Khalif</i>	
63	IRFRAM WASTE TRAP	139
	<i>Muhammad Ramzi Bin Ramli, Muhammad Irfan Bin Asri, & Affidah Mardziah binti Mukhtar</i>	
64	PREGNAMIX; RECIPE FOR BREEDING IN RUMINANTS	142
	<i>Raja Ili Airina R.K, M S Nazhiifah Amiirah, Abu Bakar K.N., Mohamad Azlan, S.S., Z Suhana, Nor M. M, & T H S T Abu Bakar</i>	
65	HEALTH CHIPS	144
	<i>Puan Fadilah Hanim Aryani Binti Abdullah, Kasthuri A/P S Visvanathan, Kaushilia A/P Haridash, Keerthana A/P Kalangan, Kirtthana Makendran, Rajtheeban A/L Muthuraman, & Suganthi A/P Muniandy</i>	
66	IoT IRRIGATION MONITORING AND CONTROL SYSTEM	146
	<i>Aziz Mamat, Wan Muhammad Amirul Asyraf Bin Azhar, & Wan Siti Zulaikha Bt Wan Azhar</i>	
67	SUITABILITY OF VEGETATION INDICES METHOD IN DETERMINING THE COCONUT TREE STRESS	148
	<i>Faris Alias & Wani Sofia Udin</i>	
68	GREENTECH PEDUNCUBE MADE FROM CUCURBITA SPP., BANANA PEDUNCLE & BENINCASA HISPIDA	150
	<i>Mohamad Khairullah Bin Atan, Amni Balqis Bt Zurkurnai, & Nuraina Nafessa Bt Abdul Hakim</i>	
69	BAMBOO AS REINFORCEMENT IN CONCRETE	152
	<i>Tengku Suriati Binti Tengku Yusoff</i>	
70	A MATHEMATICAL MODEL DEVELOPED TO PREDICT RESIDENTIAL EXPOSURE TO PESTICIDE VAPOURS EMITTED FROM TREATED FIELDS	154
	<i>Wong Hie Ling, Shaparas Binti Daliman, Marieanne Christie Leong, Siti Hajar Binti Ya'acob, & Muhammad Firdaus Bin Abdul Karim</i>	
71	ECO-TROLLEY SHOPPING BAG	156
	<i>Nur Fatihah Binti Ramli, Shahirah Binti Aziz, & Siti Hawa Binti Kadir</i>	

72	SURFACE-ACTIVE AGENT OF NEWLY ISOLATED BACTERIUM, <i>Pseudomonas sp</i> DSB7 <i>Ainihayati Abdul Rahim, Nurazeerah binti Khamis, Noor Azlina Ibrahim, Khomaizon Abdul Kadir Pahirul Zaman</i>	158
73	UNDERGROUND WATER TREATMENT SYSTEM FOR PRIMARY SCHOOL USING ECO WATER MEDIA FILTRATION (ECO WMF) <i>Nik Nurul Anis Nik Yusoff, Wan Mohd Faizal Wan Ishak, Nik Raihan Nik Yusoff, Mohamad Najmi Masri, Nabihah Abdullah, & Shafini Mohd Shafie</i>	160
74	VCENDOL: RETORT PROCESS FOR READY-TO-DRINK (RTD) CENDOL <i>Syamsuriana Sidek, Tuan Muhammad Muiz T. Nordin, Yusrinadini Zahirah Md. Isa @ Yusuff, Nurul Azwa Mohamed Khadri, & Hazrina Hasbolah</i>	162
75	BIOMARKERS EXPRESSION AS A SUCCESSFUL TREATMENT EFFICACY INDICATOR IN POST TREATMENT MANAGEMENT INNOVATION OF MANNHEMIOSIS IN GOATS <i>Mohd Farhan Hanif Reduan, Jasni Sabri, Fathin Faahimaah Abdul Hamid, Nur Athirah Abd Manaf, Intan Noor Aina, & Faez Firdaus Jeese Abdullah</i>	164
76	KOMBU-FEED⁺ : INCORPORATION OF BLACK SOLDIER FLY LARVAE MEAL AND KOMBUCHA TEA AS FISH FEED REPLACEMENT AND FEED SUPPLEMENT TO AFRICAN CATFISH, <i>CLARIAS GARIEPINUS</i>. <i>Ruhil Hayati Hamdan, Tan Li Peng, Mohd Farhan Hanif Reduan, Nora Faten Afifah Mohamed, Ain Auzureen Mat Zin, Chan Jian Ern, & Ahmad Syazwan Samsuddin</i>	166
77	PHOSPHATE SOLUBILIZING BACTERIA FROM PADDY RHIZOSPHERE AS BIOFERTILIZER <i>Nik Fatin Qharanie Binti Nik Mohd Kamaruzaman & Ainihayati Binti Abdul Rahim</i>	168
78	SPINACH CRACKER: A NEW SNACK FOOD FOR EVERYONE <i>Leony Tham, Daphane Teo Wen Xin, & Nurhanan, A.R</i>	170
79	ProovyFeed: POULTRY FEED OF SUSTAINABLE PROTEIN SOURCES <i>Khairiyah Mat, Nor Dini Rusli, Hasnita binti Che Harun, Zulhisyam bin Abdul Kari, Mohammad Mijanur Rahman, Mohd bin Mahmud, Syed Muhammad Al-Amsyar, Lee Seong Wei, & Leony Tham Yew Seng</i>	172
80	ACTIVATED CARBON FROM FOXTAIL PALM FRUIT FOR REMOVAL OF METHYLENE BLUE, Cr(IV) AND METAMIFOP <i>Nik Raihan Nik Yusoff, Nisrina Nadia, Noor Syuhadah Subki, Rozidaini Mohd Ghazi, Asanah Radhi, Nik Nurul Anis, Musfiroh Jani, & Noor Janatun Naim, Marinah Muhammad</i>	174
81	BIOCIDE FOR SICK BUIDLING SYNDROME FUNGUS (BioC-F) <i>Muhamad Azahar Abas, Kamarul Ariffin Hambali, Muhammad Firdaus Abdul Karim, Lukman Ismail, Nor Hizami Hassin. Nurul Syazana Abdul Halim, Amal Najihah Muhamad Nor, Hamzah Hussin, & Hafizi Rosli</i>	176
82	SWEET POTATO AND BLACK BEAN PASTA <i>Nurhanan, AR & Nur Azhani Azzaharah, N</i>	178
83	A RAPID DIAGNOSTIC TECHNIQUE FOR DETECTION OF VIRAL DISEASES <i>Ruqayyah Ainul Bashirah, Nurulhuda Najihah Zainal Abidin, Nur 'Atikah Abdul Latif, Mariatulqabtiah Abdul Razak, & Kuo Pin Chuang</i>	180
84	INTEGRATED SOLAR-IoT MONITORING AND PREDICTIVE MAINTENANCE SYSTEMS FOR IRRIGATION (S-IoTP) <i>Hasyiya Karimah Adli, Khairul Nizar Syazwan Wan Salihin Wong, Muhammad Akmal Remli, & Ku Azmie Ku Husin</i>	182
85	SPATIAL FRAMEWORK OF ZERO COVID 19 OUTBREAK FOR SUSTAINABLE HEALTH IN KELANTAN <i>Amal Najihah Muhamad Nor, Rohazaini Muhammad Jamil, Hasifah Abdul Aziz, Muhamad Azahar Abas, Siti Aisyah Nawawi, Marieanne Christie Leong, Kamarul Ariffin Hambali, Nor Hizami Hassin, Muhammad Firdaus Abdul Karim, Aainaa Syazwani Mohamad Amir Hamzah, Wani Sofia Udin,</i>	184

Roniza Ismail, Nazahatul Anis Amaludin, Mohamad Faiz Mohd Amin, Norfadhilah Ibrahim, Abdul Hafidz Yusoff, Nur Hairunnisa Razaai, & Nur Hanisah Abdul Malek

- | | | |
|-----------|---|-----|
| 86 | SUPER PROTECTION GRPAHENE FACE MASK
<i>Thinakaran Narayanan & Kaushik Pal</i> | 186 |
| 87 | IComPBag
<i>Azura Sharena Yahaya, Siti Nor Farhanah Sh Nor Shahidin, & Mohd Fahmi Lukman</i> | 187 |
| 88 | MICROENCAPSULATED ASTAXANTHIN FACE SERUM
<i>Nik Nur Azwanida Binti Zakaria, Nurul Najwa Izzati Binti Mohd Zakuwan, & Zuharlida Tuan Harith</i> | 189 |
| 89 | TOMCAT TRAP
<i>Nik Azida binti Abd Ghani, Juli Suzlin binti Jalaluddin, Syed Zainal Abidin bin Syed Noor Wahid, Muhammad Azham Aizil bin Othman, Nurul Durrani binti Afandi, & Hanis Izzati binti Roslan</i> | 191 |
| 90 | INNOVATIVE TREATMENT MANAGEMENT OF NOTOEDRIC MANGE WITH A COMMERCIALGAMAT OIL PREPARATION IN CATS
<i>Siti Nur Amira binti Zambri, Jasni bin Sabri, Abd Rahman bin Aziz, Ibrahim Abdul-Azeez Okene</i> | 193 |
| 91 | ANTIBIOFILM PROPERTIES OF GRAPHENE OXIDE AGAINST STAPHYLOCOCCUS AUREUS ISOLATED FROM BOVINE MASTITIS
<i>Nor Fadhilah Kamaruzzaman, Liang Vivian, & Shamsaldeen Ibrahim Saeed</i> | 196 |
| 92 | ANTI-PSOPRIASIS COSB (Cathanranthus roseus extract, Olive oil, Shea butter & Beewax) OINTMENT
<i>Sujej Kumar Rajendren, Chooi Kah Loong, Abdul Rahman Bin Aziz, & Nor Fadillah Binti Kamaruzzaman</i> | 197 |
| 93 | AUTOMATED SCREENING AND CELLS COUNTING SYSTEM FOR LEUKAEMIA AND MALARIA
<i>Aimi Salihah Abdul Nasir & Thaqifah Ahmad Aris, Mohd Yusoff Mashor, & Zeehaida Binti Mohamed</i> | 199 |
| 94 | DETECTION AND ASSOCIATED RISK FACTORS ON GASTROINTESTINAL PROTOZOA IN OWNED CATS IN SELECTED DISTRICTS IN KELANTAN
<i>Nurshahirah Shahrulnizim, Tan Wan Loong, Intan Noor Aina, Basripuzi Nurul Hayyan</i> | 201 |
| 95 | MASSAGE BAR ADDED WITH WATERMELON SKIN EXTRACT & MINT (Cool-Lit Watermelon Massage Bar)
<i>Siti Nuurul Huda Mohammad Azmin & Nur Dini Dayana Zamzuri</i> | 203 |
| 96 | SMART OPTIMIZATION SYSTEM (SOS): OPTIMIZATION SYSTEM TRACKER OF BLOOD COLLECTION OPERATION DURING COVID 19
<i>Ts. Muhamad Hafiz Bin Masran, Ts. Dr. Wan nor Munirah Ariffin, Dr. Nor Azrita Mohd Amin, Nur Arif Azezan, YM Prof. Dr. Hjh Raja Suzana Raja Kasim, & Muhammad Suhaimi bin Zaini</i> | 205 |
| 97 | PARTICLE BOARD MADE FROM WASTE EXPANDED POLYSTYRENE (EPS)
<i>Andi Hermawan, Tuan Mohamad Firdaus bin Tuan Muhamad Adnan, Sharizal bin Ahmad Sobri, Nor Hakim bin Abdullah, & Mohd Hazim bin Mohamad Amini</i> | 207 |
| 98 | HIGH GRADE ALPHA CELLULOSE OF SESBANIA GRANDIFLORA
<i>Liew Jing Xian, Boon Jia Geng, Liew Jeng Young, & Suganthi Apalasy</i> | 209 |
| 99 | GREEN POROUS CERAMIC THERMAL INSULATOR (GreenPCTI) MADE FROM WOOD SAW DUST WASTE
<i>Pao Ter Teo, Afiqah Awang Kechik, Siti Koriah Zakaria, Nur Atikah Muhammad Tharmizi, Arlina Ali, Jia Geng Boon, Mardawani Mohamad, Mohamad Najmi Masri, Julie Juliewatty Mohamed, & Mustaffa Ali Azhar Taib</i> | 211 |

100	KELANTAN BAMBOO ACTIVATED CARBON: AN ECONOMICAL AND SUSTAINABLE INNOVATION FOR WASTEWATER TREATMENT BY ADSORPTION TECHNIQUE	213
	<i>Danial Shamzari bin Hashim, Liew Jeng Young, Boon Jia Geng, Ng Kooi Huat, & Sim Kheng Yuen</i>	
101	WASTE TO WEALTH; A NOVEL BIODEGRADABLE COMPOSITES FROM AGRICULTURE WASTE FOR DRUG DELIVERY	215
	<i>Nor Hakimin Abdullah, Nur Aiman Mohamad Senusi, Rathesh Kumaran A/L Ulaganathan, & Mohammad Aiman Hakim Bin Abdullah</i>	
102	REDUCING CORROSION ON STAINLESS STEEL PIPELINE VIA HYDROGEN INDUCE CRACKING	217
	<i>Associate Professor Dr. Mohamad Najmi Masri & Nur Adeeba Zakiah Che Yusoh Zaki</i>	
103	THE IMPROVEMENT OF MAMBONG CLAY PROPERTIES WITH CALCIUM CARBONATE ADDITION	219
	<i>Nurul Ainon Bakar, Siti Mariam Mat Nor, Noruzzaman Daud, Wan Nor Dini Wan Azli Jasmi, Muhammad Qusyairi Saari, Julie Juliewatty Mohamed, & Hasanah Safein@Shafie</i>	
104	K-NUFF BLOCK	222
	<i>Mardawani Mohamad, Mohamad Najmi Masri, Teo Pao Ter, Mohd Fadzhel Mohd Nasir, Abdul Hadi Hassan, Mohd Ali Amin, Azkhari Munif</i>	
105	INNOVATION OF HERBAL LIQUID BATH SOAP WITH ALOE VERA EXTRACT AND OLIVE OIL EXTRACT EFFORTS TO BRIGHTEN THE SKIN WITH VISCOSITY METHOD AND CHEMICAL COMPOUND EXPERIMENT	223
	<i>Dika Putra Wijaya, Milan Rosa Aprilia, & Daffa Dwi Nafisah</i>	
106	THE CONVERSION OF LDPE PLASTIC WASTE INTO FUEL	225
	<i>Mohammad Shamizi bin Sayuti, Muhammad Afiq Farhan bin Ab Aziz, & Affidah Mardziah binti Mukhtar</i>	
107	MECHANICAL PROPERTIES OF CELLULOSE NANO CRYSTAL/GRAPHENE NANO PLATELETS REINFORCED POLY(LACTIC) ACID BIOCOMPOSITES	228
	<i>Abu Bakar, M. B., Mustapha, N. I., Mazli, N. I., Rosdi, N. A. M., Mohd, S. H., & Mohamed, M.</i>	
108	EFFECT OF CELLULOSE NANO CRYSTAL AND GRAPHENE NANO PLATELETS ON THERMAL PROPERTIES OF UNSATURATED POLYESTER RESIN REINFORCED KENAF FIBRE BIOCOMPOSITES	230
	<i>Bakar, M. B. A, Rosdi, N. A. M., Mohd S. H., Mohamed, M., & Abdullah, N. H.</i>	
109	PHYSICAL PROPERTIES OF CELLULOSE NANOCRYSTAL (CNC) / GRAPHENE NANOPATELETS (GNP) HYBRID NANOFILLERS REINFORCED POLYLACTIC ACID BIOCOMPOSITES	232
	<i>Abu Bakar, M. B, Mazli, N. I., Mohd, S. H., Md Akil, H., & Rosdi, N. A. M</i>	
110	DEGRADATION OF METAMIFOP BY TiO₂/Al₂O₃/CNT, TiO₂/Al₂O₃/G AND Al₂O₃/G	234
	<i>Nik Raihan Nik Yusoff, Mahani Yusoff, Rozidaini Mohd Ghazi, Asanah Radhi, Nik Nurul Anis, Musfiroh Jani, Noor Janatun Naim, & Marinah Muhammad</i>	
111	FOOD PACKAGING BIOPLASTIC FILM FROM COCOA POD HUSK INCORPORATED WITH SUGARCANE BAGASSE	236
	<i>Siti Nuurul Huda Mohammad Azmin & Najah Aliah Mohd Hayat</i>	
112	SMART VIEW AND ANTIFUNGAL ENTO CABINET (SVAFEC)	237
	<i>Norashikin Fauzi, Noor Syuhadah Subki, Zaitul Zahira Ghali@Ghazali, & Musfiroh Jani</i>	
113	TWO RODS FISHING BAIT LAUNCHER	239
	<i>Mohd Hafidzal Mohd Hanafi, Muhammad Nur Ariffuddin Nuruddina, Fadhilah Shikh Anuar, Nurul Hilwa Mohd Zini, & Mohd Noor Asril Saadun</i>	

114	THE CEILING FAN CLEANER	241
	<i>Mohd Zaidi bin Mahmud & Zahidi Bin Hivadullah</i>	
115	PORTABLE ELECTRIC GENERATOR	243
	<i>Norlila binti Mohd Yusoff, Masarizan binti Mohamed, Syahmi Adib bin Nazri, & Muhammad Nur Aiman bin Mohd Zulkifli</i>	
116	BRIDGE TESTING APPARATUS (BRIDGTEST)	245
	<i>Noor Hazwani Binti Sapuan, Farha Binti Mohamed Yasin, Mohd Yusri Bin Yusop, & Zulkiflie Bin A Wahab</i>	
117	COCONUT FIBRE GRINDING MACHINE	247
	<i>Mariam Binti Abdul Aziz, Wan Muhammad Azim Bin Wan Makhzan, & Siti Nor Syamimi Binti Abd Razak</i>	
118	DEVELOPMENT OF REALTIME MONITORING SYSTEM FOR WELDING PARAMETER MONITORING (seeWeld)	250
	<i>Sarizam Mamat, Ahmad Zaki Amiruddin, Khairul Nizar Syazwan Wan Salihin Wong, Azfi Zaidi Mohammad Sofi@Aziz, Airel Jashimiey Arifin, Rose Ellyana Alifah Roslan</i>	
119	HANDS FREE HAND SANITIZER	251
	<i>Sheilani Binti Shaari & Nur Alia Izatey Binti Ismail</i>	
120	CNC MACHINE MOTION CONTROL TECHNIQUE FOR ISO 14649 DATA INTERFACE MODEL	253
	<i>Kamran Latif, Shafinaz Ismail, Muhammad Hazimi Hilmi Md Puzi, Hamdan Syakirin Md Amir, & Krisnan Kandhian</i>	
121	LANDSLIDE SUSCEPTIBILITY MAPPING USING THE GEOGRAPHIC INFORMATION SYSTEM (GIS) APPROACH	255
	<i>Rohazaini Muhammad Jamil, Noorzamzarina Sulaiman, Nursufiah Sulaiman, Siti Aisyah Nawawi, Amal Najihah Mohamad Nor, & Norfadhilah Ibrahim</i>	
122	SMART SOLAR GRASS CUTTER	257
	<i>Mohd Hisham Bin Makhtar, Wan Muhammad Marzudi Bin Wan Muhammad, Muhammad Rozidie Bin Sazali, Muhammad Amyrul Aizat Bin Mohd Asri, & Ahmad Fahmi Bin Mohamed</i>	
123	OBIA: MAPPING FOREST MADE EASY!	259
	<i>Noor Janatun Naim Jemali, Mohd Fariz Abd Rhani, Syafinie Majid, & Marinah Muhammad</i>	
124	MOBILE PRECAST STUMP AND FOOTING	261
	<i>Mohd Yuzha Bin Usoff, Hamidah Bt Zakaria, Mohd Hilmei Bin Abdul Azif, Izhah Bin Wahab @ Hassan Basari</i>	
125	COMPRESSIVE STRENGTH OF OIL PALM SHELL CONCRETE GRADE 30	263
	<i>Tengku Suriati Binti Tengku Yusoff</i>	
126	RTK GPS CONSISTENCY IN VERTICAL CONTROL WORK	266
	<i>Nor Azme Bin Nordin, Asiah Binti Abdul Satar, & Sulzakimin Hj Mohamed</i>	
127	SMART RECYCLE BIN SYSTEM(I-BIN)	269
	<i>Anuar Bin Mohamed Kassim, Muhammad Mustaqiim Bin Roslan, , Muhammad As Shakirin Bin Abdul Aziz, Muhammad Muslim Bin Mohd Rashidin, Muhamad Afiq Shahmi Bin Shamsul Izran, Sahrul Bin Sahak, Muhammad Malek Faizal Bin Mohammad Zaini, Awangku Khairul Ridzwan Bin Awangku Jaya</i>	
128	A STUDY ON RECYCLED TYRES AS AN ADDITIVE IN CONCRETE MIXTURE	273
	<i>Nor Abidah binti Abdul Hamid, Nur Ezzah binti Mohd Sidik, Siti Farah binti Mohd Sidik</i>	
129	SELF-ENERGY GENERATION BUILDING: PORTABLE E-STORAGE DEVELOPED VIA RENEWABLE ENERGY (RE)	275
	<i>Salmiah Binti Aziz, Siti Nuratirah Binti Che Mohd Nasir, Mohammed Fadzli Bin Maharimi, Neha R Jacob</i>	
130	WASTE TO WEALTH: CASSAVA PEEL STARCH	278

	BIOFLOCCULANT	
	<i>Norzila Othman & Syazwani Mohd Asharuddin</i>	
131	DESIGN OF DOORPAGE FOR CARRYING AND INSTALLING DOORS	280
	<i>Mohd Fadly Bin Abdullah, Wan Nur Aqilah Binti Wan Nawang, & Mohd Sobri Bin Hassan</i>	
	PART 2: SOCIAL SCIENCE	283
132	VIRTUAL EARLY MATHEMATICS LEARNING KIT FOR ADDRESSING THE AMBIGUITY OF MATHEMATICAL PROCEDURAL SKILLS AND TERMINOLOGIES	284
	<i>Prof. Madya Dr. Anida Sarudin, Dr. Husna Faredza Mohamed Redzwan, Dr. Wan Mazlini Othman, Prof. Madya Dr. Zulkifli Osman, Prof. Madya Raja Noor Farah Azura Raja Ma'mur Shah, Prof. Madya Dr. Intan Safinas Mohd Ariff Albakri, Dr. Siti Rahaimah Ali, & Muhammad Nazrin Abu Bakar</i>	
133	AR OF BRITISH PILLBOX AS A MEDIUM IN EDUCATION THROUGH THE TOURISM SECTOR FOR YOUNG GENERATIONS	287
	<i>Nur Athmar Binti Hashim, Dr. Tengku Fauzan Tengku Anuar, Dr Siti Aisyah Muhammad, & Nur Farhana Bt Shuhaimi</i>	
134	PROGRAMMING TRAINER KIDS (ProKiDs)	291
	<i>Chung Boon Chuan, Nik Rahaya binti Nik Ishak, Nur Filzah Binti Mohd Fauzey</i>	
135	PROGRAMMING EDUCATION CARDS GAME (PECgame)	294
	<i>Chung Boon Chuan, Melissa Khor Suan Chin, & Udom A/L Ewon</i>	
136	SMART NOTES	297
	<i>Nik Noorafieda Binti Wan Azraen</i>	
137	STACK THE ENGLISH GAMES (STEN.G) INNOVATION FOR TEACHING AND LEARNING	299
	<i>Melissa Khor Suan Chin, Chung Boon Chuan, Siti Martini Binti Mustapha</i>	
138	SEISMIC REFLECTION INTERPRETATION USING AR APPLICATION TO ENHANCE UNDERGRADUATE STUDENT'S UNDERSTANDING	303
	<i>Noorzamzarina binti Sulaiman, Nursufiah bte Sulaiman, Rohazaini binti Muhammad Jamil, Wani Sofia binti Udin, Nor Shahida binti Shafiee @ Ismail, Fazrul Razman bin Sulaiman</i>	
139	TALKING SNAKES & LADDERS	305
	<i>Marianti binti Mohd Suhaimi</i>	
140	MOBILE APPLICATION DEVELOPMENT TO TEACH ENGLISH PROFICIENCY COURSES	307
	<i>Nazatul Syima Mohd Nasir, Nor Hazwani Munirah Lateh, Khairul Hisyam Baharuddin, Amaal Fadhlini Mohamed</i>	
141	IoT RESCUE BUTTON	308
	<i>Nazratulhuda Hashim, Wan Majdah Ton Mamat, & Zetty Rohaiza Mohd Ishak @ Sahak</i>	
142	LEGO MODEL LAYOUT PLAN TOOL KIT EXPLORATION FOR STUDIO-BASED LEARNING	311
	<i>J. Azri, N. A. H. Hamizah, H. Ramly, L. H. I. Ismi, M. K. Rizal, M. M Fadzli</i>	
143	Account4U	314
	<i>Noorul Azwin Md Nasir, Siti Afiqah Zainuddin, Nadzirah Mohd Said, Noorshella Che Nawwi, Tahirah Abdullah, Wan Farha Wan Zulkifli</i>	
144	THE LEMBAH SIREH-KB CITY WEB APP: PROTOTYPE FOR SITE ANALYSIS IN FINAL YEAR ARCHITECTURE STUDIO TEACHING	316
	<i>Najah Md Alwi, Mhd Hafiz Karami Mhd Zain, Muhammad Mujibur Rahman Bin Ahmad Safuan, Liew Ho Yen, Ariff Asyraf Bin Ab Rahman, Muhammad Azeem Bin Mohd Rizal, Nurul Fatimah Binti Said, Nur 'Izzatul Zaharah Binti Mohd Rosli</i>	
145	Jen-HyPe: ENHANCING LEARNERS' ENGAGEMENT VIA HYBRID TEACHING AND LEARNING PEDAGOGY	317

	<i>Mohamad Najmi Masri, Mardawani Mohamad, Ain Zulaikha Zuhairi, & Teo Pao Ter</i>	
146	Mar-ProD: PROJECT-BASED LEARNING APPROACH VIA INNOVATIVE PROJECT DESIGN	319
	<i>Mardawani Mohamad, Noor Fazliani Shoparwe, Rosmawani Mohammad, Teo Pao Ter, Mohamad Najmi Masri, & Wan Hasnidah Wan Osman</i>	
147	CREATING EXCITEMENT IN LEARNING THROUGH TIKTOK APPLICATIONS	322
	<i>Normaizatul Akma Saidi, Naziatul Aziah Mohd Radzi, & Mazne Ibrahim</i>	
148	PKB-JOBLINK	324
	<i>Aslamaitulakma Mohamad, Norhidayah Mohamad Yusop, & Roslina Idris</i>	
149	THE SIMULATION IN VIRTUAL LEARNING FOR PRACTICAL COURSES: A PROPOSED IDEA	326
	<i>Mazne Ibrahim, Naziatul Aziah Mohd Radzi, & Normaizatul Akma Saidi</i>	
150	GAMIAPP: USING GAMES IN WHATSAPP TO INCREASE PUPILS' ENGAGEMENT IN ENGLISH PDPR	328
	<i>Siti Hajar Akma Mohd Rawi & Mhd Hafiz Karami Mhd Zain</i>	
151	APPLICATION OF THE KIRKPATRICK MODEL: EFFECTIVENESS IN ACCOUNTING COURSE	330
	<i>Normaizatul Akma Saidi, Noraida Saidi, Derweanna Bah Simpong, Nur Azimah Othman, Hazztyati Hashim, Nadzirah Mohd Said, Wan Farha Wan Zulkiffli</i>	
152	GET2GETHER: THE WEB-APP THAT CAN WORKS WITHOUT THE INTERNET	332
	<i>Azlin Sharina Abdul Latef, Nuzul Haqimi Muhammad, Hana Yazmeen Hapiz, Sarah Wahida Hasbullah, Mohd Zaimmudin Mohd Zain</i>	
153	DEVELOPING WEBSITE FOR TEACHING DIGITAL TOOLS IN ARCHITECTURE AND CREATIVETECHNOLOGY PROGRAMS	335
	<i>Nuzul Haqimi Muhammad, Azlin Sharina Abdul Latef, Noorul Huda Mohd Razali, Hana Yazmeen Hapiz, Yuhanis Ibrahim</i>	
154	PERFORMING VISUAL INTERPRETATION AND ANALYSIS IN VIRTUAL SERIAL VISION (VSV) USING SATELLITE IMAGERY AS NAVIGATION TOOLS	337
	<i>Nor Hamizah Abdul Hamid, Muhamad Ezran Zainal Abdullah, Nurul Izzati Othmani, Syahidah Amni Mohamed, Ramly Hassan, Wan Azlina Wan Ismail, Wan Saiful Nizam Wan Mohamad, Noorliyana Ramlee, Nurfadilah Saadul Kurzi, Yeo Lee Bak, Mohd Azri Mohd Jain Noordin, Ruwaidah Borhan</i>	
155	THE ENGAGEMENT OF CLASSIC INTERACTIVE DOLLS IN ESL ONLINE CLASS FOR PDPR	339
	<i>Amaal Fadhlini Mohamed, Nazatul Syima Mohd Nasir, Ariezal Afzan Hassan, & Wan Suzanna Aafanii Adeeba Wan Hassan</i>	
156	AN INNOVATION OF AUTOMATIC SOLAR TRACKER USING ARDUINO	342
	<i>Salwati Binti Mohamed@Awang, Nik Nor hishamuddin Bin Nik Mustapha, Ahmad Baihaqi Bin Mohd Hatim</i>	
157	SRAV TRAINER KIT	344
	<i>Syed Arifin Bin Engku Sulong, Nor Juliha Binti Said, Roslinda Binti Sidek</i>	
158	SMART SPRING ABSORBER REPLACEMENT [SSAR-01]	346
	<i>Mohd Azri bin Abdul Ghani, Muhd Naqib Bin Mohd Rezali, Muhd Irfan Akif Bin Mohd Radzi, Muhd Syafiq Bin Mohd Afandi</i>	
159	DUE 10012 COURSE OVERVIEW ANIMATION VIDEO	348
	<i>Wan Rahayah Rahimi Wan Ramli</i>	
160	PORTABLE PROGRAMMABLE LOGIC CONTROLLER TRAINER WITH MODULES FOR TRAINING	350
	<i>Nurul Aemyza Binti Che Fauzi, Roslinda binti Ismail, Nurul Fatini Bt Abdul Pattah, Mohamad Adli Bin Mohamed Nor, Mphd Adli Bin Zaki, Mohd Hafiq Bin Che Sayuti</i>	

161	CONDUCT OF GRADATION TEST IN DETERMINATION OF SOIL PARTICLE SIZE DISTRIBUTION USING VIDEO	352
	<i>Norli Binti Ismail & Rus Ayunita Binti Jusoh</i>	
162	JAMBOARD IN FINANCIAL MANAGEMENT: ENGAGED AND ENHANCED STUDENT'S PERFORMANCE	354
	<i>Ruzanifah Kosnin, Siti Salina Saidin, Suchi Hassan, Ahmad Fahme Mohd Ali, & Naziatul Aziah Mohd Radzi</i>	
163	FAULT FINDER DEVICE FOR SINGLE PHASE INDUCTION MOTOR (FFIM)	356
	<i>Azani bin Mat Ali, Mohd Rizuhan Bin Jaafar, & Jafni bin Othman</i>	
164	FS MADE EASY TEMPLATE	358
	<i>Noraida Saidi & Dr. Normaizatul Akma Saidi</i>	
165	MAGIC PIZZA FLOUR	360
	<i>Hanirah Binti Mohamad Nur, Hasniza Binti Tawyer, Mohd Ramadan Bin Mohd Khalid</i>	
166	MULTIMETER KIT`S	362
	<i>Khetijah binti Samat, Julia Izura binti Jopely, Nor 'Aziah binti Abdullah</i>	
167	MOBILE EDUCATIONAL APPLICATION: SMART CASH FLOW	365
	<i>Nur Afifah Binti Ahmad & Norzaiti Aktar Binti Mohamed</i>	
168	"POGRAM MINI PROJECT" GOOGLE SITES AS AN INNOVATION IN STUDENTS'S PROGRAM IMPLEMENTATION	368
	<i>Nurliyana Husna Binti Ramli & Mohd Faizal B Ismail</i>	
169	INSTASPACE MODULE	370
	<i>Fariha Diyana Binti Awang Ali, Muhammad Anwar Bin Mohd Kamal, Mirza Madihah Bt Zainal, Jayemogen a/I Shanmugam</i>	
170	A SHORT VIDEO ON JOB INTERVIEW	372
	<i>Noor Asmaa' binti Hussin, Kamilah binti Zainuddin, Nik Nur Fathiha bin Nik Din</i>	
171	CLAP SWITCH	374
	<i>Noor Azim Hakimie B Azli, Nurliyana Husna Binti Ramli, Mohd Faizal B Ismail</i>	
172	SMART DUSTBIN	376
	<i>Muhammad Nabil Najmi Bin Mohd Razali, Muhammad Arif Farhan Bin Hanipa, Nurliyana Husna Binti Ramli, & Nazihah Bt Che Rozan</i>	
173	STEM INTEGRATED LEARNING: MECHANICAL HANDS	378
	<i>Anisah Binti Jawawi, Wan Siti Rodziah Binti Mohd Nasir, Norainin Binti Ahamed, Muhammad Hazmi Bin Mustafa Bakri, Muhammad Rafiq Amir Bin Rahimin, Muhamad Atiqullah Bin Abdullah, & Muhammad Hafizuddin Bin Amran</i>	
174	DEAR SIR: SMART INTERACTIVE RESEARCH TOOL FOR STUDENTS	381
	<i>Nadia Hanum Binti Amiruddin, Norzianis Binti Rezali @ Abdul Sukor, Sulaiman Bin Mohammed Khalid, Siti Daleela Binti Mohd Wahid, Norraidah Binti Abu Hasan, & Ahmad Sapuan Bin Hasan</i>	
175	READ-A-LOT!: READEA	383
	<i>Fatin Sabrina Abdul Sukor , Norhidayah Binti Md Yusof, Nor Fazura Md Zulkifle, Nur Baiti Binti Ismail Shauki</i>	
176	AN INNOVATION ON ENHANCING ORAL PRESENTATION SKILLS THROUGH SELF-ASSESSMENT OF VIDEO RECORDING AND ORAL PRESENTATION TEMPLATE	385
	<i>Roslan bin Mamat, Yuzaimi binti Yazid, & W. Farhana binti W. Halim</i>	
177	#SOFTWARETHESES A FASTER WAY TO FIND RESEARCH GAPS AND COLLECT CONTENTS FOR CHAPTER 1,2,3,4,5	387
	<i>Ahmad Humaizi Hilmi & Ahmad Zaim Hilmi</i>	
178	YOU ARE JACK! - ENHANCING ENGLISH LITERACY THROUGH FAIRYTALE ADVENTURE	389
	<i>Syed Muhammad Adam Syed Najib, Farah Diyana Wan Iskandar Shah, Ummi Rumaisyah Masdino, Muhammad Shafiq Muhammad Nor,</i>	

	Muhammad Al-Ameen Amir Fauwaz, Ai'syah Abd Mutalib, Nurshahirah Azman, Ann Sofee Razali, Mirza Madihah Zainal, & Hazeeq Hazwan Azman	
179	ELECTRICAL ENGINEERING MATHEMATICS APP Muhammad Shahrizal Bin Shahrimy, Wan Izyani Binti Wan Jusoh, Rozaimah Binti Mustapa	391
180	SMART POWER LOCK KIT Ahmad Zhafran Bin Yusof & Wan Amiruddin Bin Wan Mustapha	393
181	IPS GAME: LEARN BASIC SOLAT THROUGH 3D GAME Mohamad Fakhri bin Fadzil, Nadia Akma Ahmad Zaki, Nor Masharah Husain, & Nor Zuhaidah Mohamed Zain	395
182	TEACHING AND LEARNING AID OF AUTOMATIC WINDSHIELD WIPER SYSTEM Wan Husni Zaim Bin Wan Muhamad , Mohamad Bin Hitam@Yahaya, & Ahmad Suhaimi Bin Arshad	397
183	'I-MATH 4U' Ainor Izmira binti Maimun@Mahmood, Hanisah binti Yusof, & Suzilaeli binti Mohd Sarman	399
184	TUTORZONE COST & MANAGEMENT ACCOUNTING 2 Noraihan binti Mamat Zambi, Noor Hanim binti Ismail, & Nor Lailihuda binti Ismail	402
185	i-KIAMAT PROTOTYPE: INFORMATION OF 'KIAMAT' TERMINOLOGY IN AL-QURAN Khairul Asyraf Mohd Nathir & Siti Nur Baiin Che Harun	405
186	MOBILE APPLICATION OF AR SURAH AD-DHUHA Aslina Saad & Muhammad Aqmal Firdaus b. Azlin	408
187	MOBILE ROBOT DEVICE TRAINER (MoRDeT) Suriati Ramle, Ct Salwaniee Bahayahkhi, Wee Siuw Sia	410
188	HUBEE ROBLOX ENGLISH LANGUAGE LEARNING: GLOBAL DIGITAL CHANGE-MAKER IN THE MAKING Nor Hanim Mustafa & Nur Hafezah Hussein	412
189	GAMIFY LEARNING FOR SUSTAINABLE SCIENCE STUDENTS THROUGH ESCAPE GAME BASED Nurul Syazana Abdul Halim, Nor Shahirul Umirah Idris, Muhamad Azahar Abas, Norrimi Rosaida Awang	416
190	TAX KIT: I'M A JUNIOR TAX AGENT Muhammad Zamrin Bin Maliki & Wan Azilah Binti Wan Yunus	418
191	SOCIAL INNOVATOR TALENT DEVELOPMENT INNOVATIVE FRAMEWORK: CERTIFIED SOCIAL ENTREPRENEURIAL INNOVATOR PROGRAM Wan Mohd Nazdrol bin Wan Mohd Nasir, Siti Aishah Attaullah, Nik Zulkarnaen Khidzir, Jayaraj Vijaya Kumaran, Nik Maheran Nik Muhammad, & Mohamad Izharrullail Azmi	420
192	SPEAKING SQUARES Siti Martini binti Mustapha, Rosilawati binti Muhamad Ramli, Zarina binti Hashim, Noor Hafiza binti Zainuddin, & Rodey Hamza bin Hamzah	422
193	THE "RADIO OF TAFSIR QURAN": UNDERSTANDING TAFSIR QURAN THROUGH INTERACTIVE GADGET Shamsul Kamal bin Abdullah @Mohd Khir, Roslan bin Yahya, Alinawati bt Ab Aziz@Kamarulzaman, Rasidah bt Md Nor, & Mohd Zohdi bin Said	424
194	PARCEL STORAGE BOX Afiqah Natrah Binti Shahrudin, Nur Aliya Nadhirah Binti Shamsunaha, Siti Aisyah Binti Zulkifli, Wan Nur Anis Hidayu Binti Wan Zailani, Aida Ashyurani Binti Mohd Razully	426
195	A MOTIVATION VIDEO: YOU CAN DO IT! A SHORT VIDEO IN DEVELOPING TECHNICAL STUDENTS TO LOVE ENGLISH LANGUAGE Che' Fadhilah Binti Che' Lah & Shuzura binti Yusof	428

196	C.G.G. INTEGRATED E-TOOLS FOR COLLABORATIVE WRITING AND FEEDBACK IN TEACHING ACADEMIC ENGLISH WRITING <i>Nur Hafezah Hussein</i>	430
197	STEM FORENSIC KIT: SCIENCE FORENSIC LEARNING AID <i>Hazeeq Hazwan Azman, Muhamad Faqih Damarulan, Muhammad Aqil Noor Azali, Maegala Nallapan Maniyam, Norazah Mohammad Nawawi, Nadzirah Abu Samah, Khairil Bariyyah Hassan, Hasnur Hidayah Kamaruddin, Rahayu Md Khalid, Norhisyam Mat Sout, Hasdianty Abdullah, Marini Ibrahim, Nur Akmal Suliman, Muzairihana Md Moi, Yusmi Mohd Yunus, Latifah Abdul Latib & Nor Suhaila Yaacob</i>	432
198	COMPRESSOR DUSTBIN <i>Siti Noor binti Abdullah, Rohani binti Yusof, Nur Amirah binti Mat Zubir</i>	434
199	SURPRISE BOARD TO ENHANCE COMMUNICATION SKILLS <i>Che' Fadhilah Binti Che' Lah, Shuzura Binti Yusof, Melissa Khor Suan Chin</i>	436
200	DEVELOPMENT OF FLIP CLASSROOM INTERACTIVE NOTES FOR BUILT UP RATES <i>Ross Saliha Safura Binti Hamzah, Affidah Mardziah binti Mukhtar, & Dr. Tengku Ahmad Badrul Shah Bin Raja Hussin</i>	438
201	CREATE YOUR SOCIAL ENTREPRENEURSHIP (CYSE) <i>Sathiswaran Uthamaputhran, Hasannuddiin Hassan, & Mohd Ikhwan Aziz</i>	441
202	WRITER BOOSTER <i>Mohd Zulkifli Muhammad, Ahmad Ridhuwan Abdullah, Zul Karami Che Musa, Azwan Abdullah, Noorshella Che Nawi, & Mahathir Muhamad</i>	443
203	MUSLIMAH SAFETY BAG DEVICE <i>Rohana binti Abdullah, Zunaidawati binti Mat Daud, & Azizah binti Che Musa</i>	446
204	QS JUNIOR MOBILE LEARNING APPLICATION <i>Sukmawati Ismail, Nor Ashikin binti Mazlan, & Zahurin Binti Husin</i>	448
205	THE JOME CARD GAMES: FROM TEACHING INNOVATION TO COMMERCIAL GAME <i>Johan bin Ismail, Nur Eliza binti Abd. Rahman, Nurdiyana binti Ahmad Denil, Rozihan bin Mohamed, Ahmad Nasir bin Mohd. Yusoff</i>	450
206	MY E-VOCABULARY PROFILE (MEVP): TEACHER'S PERSPECTIVE ON ITS USABILITY <i>Norshazrina Sabri, Liyana Ahmad Afip, Aveleena Afzan Hassan, & Nursyuhada Zakaria</i>	452
207	MYOT_G: AN INNOVATIVE AND INTERACTIVE E-TEACHING METHOD FOR PRE-UNIVERSITY STUDENTS <i>Hutkemri Zulnaidi, Raihan Zainudin, & Mohd Zahurin Mohamed Kamali</i>	454
208	GLOBAL UMRAHAJI GAME (GUG) <i>Prof. Dr. Azman Ab Rahman, Afaf binti Sukari, Mohamad Anwar Zakaria, Muhammad Faiz Abd. Shakor, Nurul Nadia binti Nozlan</i>	457
209	LEARNING GRAPH THEORY BY USING ROTHE-Q INNOVATION METHOD <i>Nur Izzati Abd Aziz @ Mughni, Kalaiarasan A/L Subramaniam, Nik Atikah Nik Adnan, Noorul Afiah Mohamed Shuaib, Nur Fatehah Zaharim, Hutkemri Zulnaidi</i>	460
210	PERMUTATION AND COMBINATION USING VELEAOFF (INTERACTIVE LEARNING OFFLINE) <i>Siti Nabila binti Sulaiman, Siti Nur Shafila binti Che Kamaruzaman, Wan Nurshairah binti Wan Mohammad Nizam, Nadiah binti Mohd Yusuff, & Hutkemri Zulnaidi</i>	462
211	OPTIMISING EBOOK TO OVERCOME STUDENTS' ONLINE LEARNING CHALLENGES <i>Wan Yusoff Wan Shaharuddin, Ruzaini Ijon, Yasmin See, Mohammad Affiq</i>	464

	<i>Kamarul Azlan, Mohd Asyraf Zulkfli, Nur Syahirah Mohd Nawawi, Noraini Hj. Zaini, & Julia Tan Yin Yin</i>	
212	TMCAS MODEL: REIMAGING AN IMPACTFUL VIRTUAL COLLABORATIVE PROJECT BASED LEARNING IN TEACHING ENTREPRENEURSHIP <i>Fadhilhanim Aryani bt Abdullah, Noor Raihani Binti Zainol, Nur Farihin Binti Abd Hadi Khan, Muhamad Nasyat Muhamad Nasir, Aikal Liyani Binti Mohd Rasdi</i>	466
213	CHATBOT: I'M NOT PERFECT BUT I'M HERE TO HELP <i>Wan Suzanna Aafanii Adeeba Wan Ibrahim, Nur Hafezah Hussein, Siti Bahirah Saidi, Ariezal Afzan Hassan & Amaal Fadhlini Mohamed</i>	469
214	TEACHING AND LEARNING OF THE PLAN AND ELEVATION USING GEOGLE-WALL APPROACH <i>Hutkemri Zulnaidi, Fatin Farhayu Mohd Salim, Noor Syuryani Lokman, Nur Asfa Dini Azmi, Nur Hanis Nabilah Saihuddin, Nurul Shafiqah Ismail</i>	471
215	DEVELOPING WEBSITE FOR MANAGING STUDENT IN ENTERPRISE PROGRAM (SIEP) IN FACULTY OF ARCHITECTURE AND EKISTICS <i>Nuzul Haqimi Muhammad, Azlin Sharina Abdul Latef, Ismi Luqman Hamadi Bin Ibrahim, Nurul Izzati Binti Othmani, Muhammad Rizal Bin Khairuddin</i>	474
216	DIGITAL STORYTELLING: A HOLISTIC PROJECT BASED LEARNING TO ENHANCE 21st CENTURY SKILLS <i>Najihah Mahmud, Siti Amirah Ahmad Tarmizi, Amaal Fadhlini Mohamed, & Ariezal Afzan Hassan</i>	476
217	ADAPTATION OF INTERACTIVE WEB TOOLS 2.0 IN ENTREPRENEURSHIP COURSES <i>Hazrina Hasbolah, Nurul Azwa binti Mohamed Khadri, Dr. Syamsuriana binti Sidek, Dr. Yusrinadini Zahirah binti Md, Isa@Yusuff</i>	478
218	CATCH ME FOR I - SCIENCE <i>Hasanah Binti Safein @ Shafie, Muhammad Daniel Nafis Bin Ahmad, Muhammad Yahya Bin Mat Rashid, Wan Mohamad Fikri Bin Wan Shahrudin</i>	481
219	E-LEARNING IN SPANISH LANGUAGE <i>Mariyati Haji Mohd Nor, Harnani Mat Zin, Harozila Ramli</i>	483
220	i-2tor: THE 21ST CENTURY APPROACH FOR EDUCATION PLATFORM <i>Joanna Ng Row Yee, Muhammad Faizul Hakimi Bin Kamaruzzaman, Nur Farah Hanis Binti Jalalol Khaizi, Nur Zahidah Binti Muhamad Taher, Mazlan Bin Radzwan, Lelia Nastasia Binti Amlie, & Roslizawati Binti Che Aziz</i>	486
221	NEARPOD: APPLICATION OF INTERACTIVE VIRTUAL REALITY IN TOURISM COURSES <i>Nurzehan Abu Bakar, Marlisa Abdul Rahim, Nor Maizana Mat Nawawi, Siti Salina Saidin, & Suchi Hassan</i>	489
222	DIGITALIZED SUSTAINABLE SCIENCE COURSES THROUGH E-LEARNING INTERACTIVE APPROACH <i>Noor Syuhadah Subki</i>	491
223	THE USE OF STUDY APPS IN IMPROVING STUDY HABITS AMONG UNDERGRADUATE STUDENTS <i>Khairul Hisyam Bin Baharuddin, Nazatul Syima Binti Mohd Nasir, Nor Hazwani Munirah Binti Lateh</i>	493
224	ERAoI: A-10 MINUTES FORMATIVE EVALUATION APPROACH <i>Siti Hajar Ya'acob, Siti Aisyah Nawawi, Noor Syuhadah Subki, Nor Shahirul Umirah Idris, Wong Hie Ling</i>	495
225	SUBMIT A MOBILE APPLICATION FOR ASSIGNMENT DUE DATES MANAGEMENT: A MOBAGOGY <i>Siti Afiqah Binti Zainuddin, Noorul Azwin Binti Md Nasir, Tahirah Binti Abdullah, Noorshella Binti Che Nawawi, Wan Farha Binti Wan Zulkiffli, Mohd</i>	496

	<i>Nor Hakim Bin Yusoff, Siti Salwani Binti Abdullah, Ahmad Ridhuwan Bin Abdullah, Siti Rohana Binti Mohamad, Siti Nurul Shuhada Binti Deraman, Nur Farahiah Binti Azmi, Nur Izzati Binti Mohamad Anuar, Nik Alif Amri Bin Nik Hashim, & Hazriah Binti Hasan</i>	
226	“SAINS KEJURUTERAAN” SMARTPHONE APPLICATION AS AN ONLINE TEACHING AND LEARNING METHOD	498
	<i>Mohd Sanusi Deraman, Rozaimah binti Mustapa Marhaniza Ibrahim, Nurliyana Husna Ramli, Rosliza Ayob, & Anisah Jawawi</i>	
227	TIKTOKING TO IMPROVE SPEAKING SKILLS: A SOCIOCOGNITIVE CASE STUDY OF MALAYSIAN ESL LEARNERS	500
	<i>Siti Amirah Ahmad Tarmizi, Najihah Mahmud, Amaal Fadhlini Mohamed, & Ariezal Afzan Hassan</i>	
228	MOBILE LEARNING INNOVATION: PKB FINANCIAL MANAGEMENT CALCULATOR	503
	<i>Norhidayah binti Mohd Salleh & Madiha bt Hasbullah</i>	
229	MODEL OF THE INFLUENCE BY FIRM SIZE ON FINANCIAL PERFORMANCE IN MALAYSIAN ICT SECTOR	506
	<i>Mohd Fazli Bin Mohd Sam, Brenda Lim Xun Li, & Nurul Hasyimah Mohamed</i>	
230	FUND FOR FOOD: COMPLETE GUIDE TO HELP FIGHT HUNGER ON CAMPUS	508
	<i>Nurul Hafizah Mohd Yasin, Fadhilhanim Aryani Abdullah, Nur Haiza Nordin, Nur Naddia Nordin, Nur Dalila Mat Yusoff, Nik Noorhazila Nik Mud, Siti Zamanira Mat Zaib, Nurul Fardila Abd Razak</i>	
231	SOUP KITCHEN AS SOCIAL ENTERPRISE STRATEGY: A RIPPLE EFFECT THEORY	511
	<i>Noor Raihani Zainol, Anis Amira Ab Rahman, Shamsul Anuar Salim, Mohd Shahril Nizam Md Radzi, Mohd Hafis Mohd Fauzi, Nor Shuhada Ahmad Shaupi, & Azila Jaini</i>	
232	KEEP ACCOUNT YEARLY FOR SUSTAINABLE AUDIT REPORTING (KAYSAR) APPS	512
	<i>Nik Zakiah Nik Mohamed Zain, Noor Raihani Zainol, Rafiq Sharman Khamis, Mohd Hafis Mohd Fauzi, & Yohan Kurniawan</i>	
233	PROTOTYPE OF BIODEGRADABLE PACKAGING MATERIAL FROM MUSM	514
	<i>Laila Naher, Nor Alifa Mirza I, Norhafizah Md Zain, Nurhanan Abdul Rahim, Ch'ng, H.Y, M.M.Nor, Siti Maryam Salamah, & NurHusna Syahirah</i>	
234	INTEGRATING ENVIRONMENTAL ELEMENT IN MAXIMIZING BUSINESS PROFIT: AN APPLICATION OF HEDONIC PRICING METHOD	516
	<i>Nur Syafiqah A. Samad, Norzalizah Bahari, Siti Fariha Muhamad, Adi Aizat Bin Yajid, & Mohd Fathi Bin Abu Yaziz</i>	
235	AN INTEGRATED ONLINE HUB FOR MUSLIM FRIENDLY HOMESTAY OPERATORS IN MALAYSIA	518
	<i>Nadzirah Mohd Said, Derweana Bah Simpong, Hazyati Hashim, Nur Azimah Othman, Normaizatul Akma Saidi, & Wan Farha Wan Zulkiffli</i>	
236	DEVELOPING HOLISTIC PERFORMANCE MEASUREMENT INDEX FOR ISLAMIC BANKS	519
	<i>Siti Fariha Muhamad, Nur Syafiqah A. Samad, Adi Aizat Yajid, Mohd Rushdan Yasoa', Muhamad Nasyat Muhamad Nasir, Fahru Azwa Mohd Zain</i>	
237	DIAGNOSIS FRAMEWORK OF PERSONAL CASH FLOW STATUS VIA I-KFC	521
	<i>Azwan Abdullah, Mohd Nazri Zakaria, Noormariana Mohd Din, Mohd Ikhwan Aziz, Mohd Zulkifli Muhammad, Wan Ahmad Amir Zal Wan Ismail, Tengku Fauzan Tengku Anuar, Nurhanan Abdul Rahman, Hafizi Mat Salleh, & Siti Asma Md Rasdi</i>	
238	B40 SINGLE MOTHER MICRO ENTREPRENEUR EMPOWERMENT PROGRAM THROUGH ONLINE TRAINING AND MONITORING	525
	<i>Mohammad Noorizzuddin Nooh, Jamal Abdul Nassir Bin Shaari, Norhaziah Nawai, Mohd Shukor Harun, Nurul Aini Muhamed, Mahdhir Abdullah, &</i>	

	Zulkifly Mohd Zaki	
239	FRESHGO CLOUD DATA WAREHOUSE CONCEPT WITH MUTUALISTIC ECOSYSTEM <i>Intan Nurrachmi, Anthon Budyana, Hardyansyah, & Rizky Alamsyah Nurdianto</i>	527
240	HUB FOR SOCIAL ENTREPRENEURSHIP (HUBSOE): CATALYSING IMPACTFUL INNOVATIVE SOLUTION TO SOCIAL AND ENVIRONMENTAL SUSTAINABILITY <i>Noor Raihani Zainol, Anis Amira Ab Rahman, Nurul Izyan Mat Daud, Zul Karami Che Musa, Nur Ain Ayunni Sabri, Mohd Zulkifli Muhammad, Roselina Ahmad Saufi, Fatin Najihah Nik Muhammad</i>	530
241	G-ROLES: FBS MODEL <i>Nurul Ashykin Abd Aziz, Nik Syuhailah Nik Hussin, Zuraimi Abdul Aziz, Hasif Rafidee Hasbollah, & Mohd Hizam Hanafiah</i>	532
242	MAGIC WOODEN FOLDING TABLE <i>Siti Hajar Binti Mud Ariff, Maizatul Aisya Binti Ab Halim, Nur Fatin Syafiqah Binti Mazani, Nur Anis Ayunie Binti Kamarudin, Nur Anisah Binti Idzuwan</i>	535
243	MINI HAND SANITIZER <i>Norbaini Binti Ghazali, Nik Umira Fatinn Bt Nik Ismail, Koh Liew Min</i>	537
244	AYAM PERCIK PRE-MIXED POWDER <i>Noraida binti Ismail @ Yusof, Juli Suzlin binti Mohd Jalaludin, Nur Alifah Hafizah binti Ezairoskan, Nurul Shahida binti Jusoh @ Yusoff</i>	539
245	UIJA TWIST <i>Razia Malini binti Mohamad, Rosilah binti Wok, Syahidatul Aqma binti Mohd Zamri, Nurul Izzaty Akmal binti Ropi, Faridatul Hamidah binti Zulkifli</i>	541
246	CROWDFUNDING AS A TOOL FOR ENTREPRENEURSHIP EDUCATION IN HEIs <i>Ahmad Ridhuwan Abdullah, Zul Karami bin Che Musa, Siti Salwani binti Abdullah, Dzulkifli bin Mukhtar, Muhammad Naqib Bin Mat Yunoh, Mohd Shahril Nizam Bin Md Radzi, Mohd Zulkifli bin Muhammad, Mahathir bin Muhamad, Abd Aziz Bin Mat Hassan, Siti Afiqah Binti Zainuddin, Siti Rohana Binti Mohamad, Nur Farahiah Binti Azmi, Nur Izzati Binti Mohamad Anuar, & Siti Nurul Shuhada Binti Deraman</i>	543
247	BRIDGING THE GREEN GAP: AN INTEGRATED FRAMEWORK TO UNDERSTAND CONSUMERS' ACTUAL CONSUMPTION DRIVING FORCES TOWARD ORGANIC FOOD IN MALAYSIA <i>Brahim Chekima, Azaze-Azizi Abdul Adis, Suddin Lada, Rozilee Asid, & Toh Pei Sung</i>	545
248	PI-ASISSTANT COMBO: PROMOTION ITEM COMBO TOOL TOHELP RETAIL INDUSTRIES TO SET OPTIMAL PROMOTION ITEMS <i>Ts. Dr. Wan Nor Munirah Ariffin, Ts. Muhamad Hafiz Masran, Dr.Nor Azrita Mohd Amin, YM Prof. Dr. Hjh Raja Suzana Raja Kasim, Dr. Emy Aizat Azimi, Prof. Ts. Dr. Mohd Mustafa Albakri Abdullah</i>	547
249	KETAPANG POUCH <i>Roslina bt Ab Rahman, Muhammad Mukhlis bin Hamdan, Nur Azlin Asyikin binti Azizi, Muhammad Naim Aiman bin Razali</i>	549
250	MODELING THE TALENT SHORTAGE THROUGH SUPPLY AND DEMAND ATTRIBUTES FOR YOUTH IN ISLAMIC BANKING INSTITUTION <i>Mohd Ikhwan Aziz, Hassanuddin Hassan, Sathiswaran Uthamaputhran, Azwan Abdullah, Siti Norjannah Mohd Jamil</i>	550
251	SUSTAINABLE eHALAL AGROCHAIN MARKETPLACE USING BLOCKCHAIN INNOVATION <i>Raja Suzana Raja Kasim, Amir Shafiq Abdullah, Zulazli Hashim, Nurul Afiqah Zulazli, & Wan Nor Munirah Ariffin</i>	552
252	MAPPING OF TOURISM IN JELI, KELANTAN THROUGH AUGMENTED REALITY (AR) APPLICATION <i>Norazlinda Mohamed Rosdi, Daeng Haliza Daeng Jamal, Max Martin Petel, Hazrina Hasbolah</i>	556

253	My Escapade! APPS: EXPLORING ADVENTURE TOURISM DESTINATION <i>Siti Nur Farhana Dzulkipili, Nor Azwani Anuar, Zahidah Mad Loddin, Roslizawati Che Aziz, & Nik Alif Amri Nik Hashim</i>	558
254	ULAM COOKIES <i>Derweanna Bah Simpong, Nur Azimah Othman, Normaizatul Akma binti Saidi, Hazyati binti Hashim, Nadzirah binti Mohd Said, & Wan Farha binti Wan Zulkiffli</i>	561
255	MALAYSIAN TREE SELECTION MODEL FOR RIGHT TREE SPECIES <i>Ramly Hasan, Nor Hamizah Abdul Hamid, Wan Saiful Nizam Wan Mohamad, & Noorliyana Ramlee</i>	565
256	1CLICK BUDGET TRAVEL:ONE-STOP PLATFORM FOR BUDGETING TRAVELLER <i>Mallini A/P Anparasan, Dhivyaa A/P Selvalumaran, Khirrun An Nisa Bahaudin, Elly Maya Masnida Othman, Chua Hui Qi, Leong Wen Qin, & Roslizawati Che Azi</i>	567
257	TAMI MULTIPURPOSE HAND SANITIZER <i>Velan Kunjuraman, Fatimah Zahra Dahalan, Mohd Saiful Jamil, Nur Ain Syafiqah Asha'ari, Wan Muhammad Aqramin Wan Othman, Damayanti Tindo Purwanto, Fatin Nur Hazwani Haron, Nurin Hazirah Razdi, Nurshafikah AB Majid, Nurul Nadia Najmi Azman & Nursyahira Badarudin</i>	570
258	MYh-SMART: AN INNOVATIVE APP FOR HOSPITALITY INDUSTRY <i>Velan Kunjuraman, Fadhilahanim Aryani Binti Abdullah, Noor Raihani Binti Zainol, Michelle Hoo Yean Nee, Cheah Ing Zhen, Cheong Hui Yin, Chia Choy Cheng Crystalbel, Lee Jia Jin, Lim Chai Hui, Sen Mei Lam, Tan Chin Haw, Tan Hong Lin, & Wee May Yee</i>	571
259	FAIR SKIN PRODUCT <i>Nor Syuhada Zulkefli, Fadhilahanim Aryani Abdullah, Norelisa Bakri, Nurdy'anna Nordin, Siti Munirah A. Kadir, Arisa Arifah Kamaluddin, Nur Humirah Rizwan, Nur Rusfadilah Ruslan</i>	573
260	HERB2BE HERBS TEABAG: SOLUTION TO DYSMENORRHOEA (MENSTRUAL PAIN) <i>Nur Athirah Sumardi, Fadhilahanim Aryani Abdullah, Nur Hafizah Muhammad, Ghazali Ahmad, Nur Aliah Mansor</i>	575
261	PROTOTYPE FORMATION FOR DEVELOPING HERITAGE TRAIL VIA QR CODE APPLICATION AT SUNGAI BUDOR VILLAGE, KELANTAN <i>Ramly Hasan, Shardy Abdullah, Wan Saiful Nizam Wan Mohamad, Noorliyana Ramlee, Mohammad Rusdi Mohd Nasir, Yeo Lee Bak, Wan Azlina Wan Ismail, Nurul Izzati Othmani, Syahidah Amni Mohamed, Nurfadilah Saadul Kurzi, Nor Hamizah Abdul Hamid</i>	577
262	3 LAYERS KAMPUNG SCENTED CANDLE <i>Ruzanifah binti Kosnin, Fadhilahanim Aryani binti Abdullah, Aina Mawaddah Binti Hamdanni, Diveiga A/P Poobalan, Fatin Nurliyana Binti Mohd Rosley, Izzati Binti Razlee, Khalida Najihah Binti Johan, Norshazani Binti M Hanafi, Nur Hanis Binti Mohd Nasir, Nurin Rasyidah Binti Rosli, Rohaya Binti Jonaidey, Siti Syazwina Binti Abdul Hamid</i>	578
263	SCIENTIFIC ECO-AGRO TOURISM MODEL IN MERAPOH, PAHANG <i>Muhammad Aminuddin Baqi bin Hasrizal Fuad, Mohammad Hafiz Bin Mohd Yazid, Mohamad Nur Arifuddin Bin Mad Yusof, Mohamad Izereen Bin Amat Mukri, Balakrishnan Parasuraman, Suganthi Appalasaamy, Boon Jia Geng, & Jayaraj Vijaya Kumaran</i>	580
264	EMOSIHAT: AN EMOTION BOARD GAME FOR CHILDREN <i>Siti Fatimah Ab Ghaffar, Normaizatul Akma Saidi</i>	582
265	3D ANIMATION APPLICATION FOR THE COVID-19 QUARANTINE AND LOW-RISK TREATMENT CENTRE (PKRC) DEVELOPMENT <i>Siti Aisyah Muhammad, Tengku Fauzan Tengku Anuar, Nur Athmar Hashim, Nik Nurul Hana Nik Hanafi, & Najah Md Alwi</i>	584

266	SMART JACKET: A MULTI-UTILITY TRAVEL JACKET FOR TRAVELLERS <i>Muhammad Azam Aziz, Muhammad Asyraf Najmi Azmi, Najwa Izzani Laili, Noor Syazwani Narzuwan, Murni Husna Muhamad Jehka, Sangeetha Sangkar, Previna Vijayan, Ng Huoi Hsian, Nik Alif Amri Nik Hashim</i>	586
267	MODISH TRAVEL HEATER: THE INNOVATION OF NIMBLE TIFFIN <i>Nor Dalilla Marican, Aifaa Syazwani Abdul Razak, Nurfarisha Fauzi, Nurul Najwa Nasuha Muda, Syazwani Sahwandi, Syed Muhammad Izzat, Nur Farah Wahida Saidi, Nur Nabilah Husna, Nurul Farhana Mohd Hanafi, Fatin Afikah Talib, Fatin Shahirah Sholahudin</i>	588
268	PROTOTYPE SNEAKER INSOLES SENSOR <i>Woo Wai Yee, Chan Kit Min, Chiang Zhi Ying, Hoo Jia Ming, Wong Pei See, Chin Chi Fung Tiew Yee Shan, Tchey Guat Nee, Pn.Fadhilahanim Aryani Binti Abdullah, Dr.Derweanna Binti Bah Simpong, Mohd Hafzal Bin Abdul Halim</i>	590
269	AVOCADO EL CABELLO OIL (NATURAL HAIR SERUM) <i>Fadhilahanim Aryani Abdullah, Naziatul Aziah Mohd Radzi, Nur Farah Nabilah Aina Ruslan, Nurafyrra Joha, Maryam Sahla Che Mohd, Kaiyisah Mohd Apandi, Nurin Aqilah Natasha Rosli, Haida Misnon, Izni Zulaikha Kamarezaman, Norazni Azikin Norhisham, Nur Syuhaida Safiee</i>	591
270	PROPOSING A CONCEPTUAL MODEL OF DESTINATION LOYALTY: TWO PARALLEL MEDIATORS OF PLACE ATTACHMENT AND TOURIST MOTIVATION <i>Muhamad Nasyat Muhammad Nasir, Marlisa Abdul Rahim, & Siti Fariha Muhammad</i>	594
271	THE VALUES OF HEROISM IN TOK TANGOK FOLKLORE AS A SYMBOL OF PERSONALITY AND INDENTITY OF MALAY COMMUNITY: RESEARCH ON THE PERCEPTION STUDENTS IN UNIVERSITY MALAYSIA KELANTAN THROUGH KAHOOT APPLICATION <i>Mohd Firdaus Che Yaacob, Muhammad Nur Al-Hakim Mohamad Hanafiah, & Tuan Siti Nurul Suhadah Tuan Adnan</i>	596
272	LEGENDA PUTERI SAADONG NARRATIVE APPRECIATION THROUGH 2D GAME APPLICATION <i>Fairuladilan Hamadun, Izati Nabila Marzuki, Md Ariff Ariffin, Hidayat Hamid, Suraya Md Nasir, Farrah Atikah Saari, Daeng Haliza Daeng Jamal, Tan Tse Guan, Anuar Mohd Yusof</i>	598
273	VIRTUAL HERITAGE TOUR THROUGH AUGMENTED REALITY (AR): APPLICATION ON MUSEUMS IN KOTA BHARU, KELANTAN <i>Daeng Haliza Daeng Jamal, Norazlinda Mohamed Rosdi, Izati Nabila Marzuki, Fairuladilan Hamdun, & Hazrina Hasbolah</i>	601
274	AUGMENTED REALITY (AR) NATION'S PILLARS STREET ART IN KOTA BHARU FOR URBAN REGENERATION AND TOURISM <i>Tengku Fauzan Tengku Anuar, Hani Izzaty Mohd Jamil, Wan Ahmad Amir Zal Wan Ismail, Suraya Md Nasir, Haris Abadi Abdul Rahim, Nawwal Abdul Kadir, Nur Athmar Hashim, Izati Nabila Marzuki, Md Ariff Ariffin, & Siti Aisyah Muhammad</i>	603
275	IMPROVING THE USER INTERACTION THROUGH BAMBOOSA VOID PAVILION AT HOSPITAL PASIR MAS, KELANTAN <i>Zulhilmi Zahari, Wan Azlina Wan Ismail, Ramly Hasan, Nurul Izzati Othman, & Nor Hamizah Abdul Hamid</i>	606
276	AN ENVIRONMENTAL ADAPTIVE DESIGN OF THE ECLECTIC SET <i>Lai Man Fai, Wan Azlina Wan Imail, Ramly Hasan, Nor Hamizah Abdul Hamid, Yeo Lee Bak, & Nor Diana Aziz</i>	608
277	SPACE SAVING AND SUSTAINABLE FOR CYCLIST BY COMBINATION DESIGN AS CYCLIST FRIENDLY BENCH AT SUNGAI LEMBING, KUANTAN, PAHANG <i>Lee Pui Yin, Wan Azlina Wan Ismail, Ramly Hasan, Nor Diana Aziz, Nor Hamizah Abdul Hamid, & Nurul Izzati Othmani</i>	610

278	THE CONNECTEDNESS BETWEEN SPACES TO STIMULATE THE LIVEABLE ENVIRONMENT BY THE PLEXUS IN JOHOR BAHRU CITY CENTRE, JOHOR <i>Nur Rabihtul Samsudin, Wan Azlina Wan Ismail, Ramly Hasan, Noorliyana Ramlee, Yeo Lee Bak, & Nor Diana Aziz</i>	611
279	BUBU ARCHWAY <i>Syamimi Mohd Noor, Ramly Hasan, Wan Azlina Wan Ismail, Nor Diana Aziz, Mohammed Fadzil Maharimi</i>	612
280	THE UNIQUENESS OF BLOSSOM CATCHMENT WATER <i>Aqilah Azeni, Ramly Hasan, Wan Azlina Wan Ismail, Nor Diana Aziz, Mohd Azri Mohd Jain Noordin</i>	613
281	THE ATTRACTIVE OF NEON TUNNEL DESIGN <i>Muizzuddin bin Basharudin, Wan Azlina Wan Ismail, Ramly Hasan, Nor Hamizah Abdul Hamid, Nor Diana Aziz, & Muhamad Hilmi Mohamad @Masri</i>	615
282	GERBANG MEK MAS AS A NEW ICONIC STRUCTURE AT KAMPUNG PANTAI MEK MAS, KOTA BHARU <i>Muhammad Aslam Husaini Mohd Sapuan, Ramly Hasan, Wan Azlina Wan Ismail, Syahidah Amni Mohamed, & Nor Diana Aziz</i>	616
283	SINGGAH JELAPANG AS PARADIGMATIC STRUCTURE AT PENDANG TOWN <i>Noor Saadah Hussain, Ramly Hasan, Wan Azlina Wan Ismail, Muhamad Hilmi Mohamad @ Masri, Syahidah Amni Mohamed, & Nor Diana Aziz</i>	617
284	SMART SCULPTURE BENCH <i>Siti Fatin Hamida Zinun, Ramly Hasan, Wan Azlina Wan Ismail, Nor Diana Aziz, & Muhamad Hilmi Mohamad @ Masri</i>	618
285	TRADITIONAL ELEMENT OF MALAY TERENGGANU: INTRODUCING GAZEBO PERMAI AT SUNGAI TAROM PUBLIC PARK, SETIU, TERENGGANU <i>Mohamad Hazmie Bin Rusdi, Wan Azlina Wan Ismail, Ramly Hasan, Nor Diana Aziz, & Mohd Azri Mohd Jain Noordin</i>	620
286	AGRONOMICAL SHELTER AS AN EDUCATION CENTER FOR URBAN FARMING AWARENESS <i>Amirul Hidayat Hussin, Wan Azlina Wan Ismail, Ramly Hasan, Noorliyana Ramlee, Nor Diana Aziz</i>	621
287	SOLVING THE COASTAL EROSION AND SUSTAIN THE COASTAL ECOSYSTEM THROUGH THE ECO FRIENDLY DEFENDER AT PANTAI IRAMA, BACHOK, KELANTAN <i>Leong Kam Hung, Wan Azlina Wan Ismail, Ramly Hasan, Noorliyana Ramlee, & Nor Diana Aziz</i>	623
288	DESIGNING CREATIVE ONE STOP GETAWAY AT DANGA BAY WATERFRONT <i>Muhammad Firdaus Rahim, Wan Azlina Wan Ismail, Ramly Hasan, Nur Hafizah Ramle, & Nor Diana Aziz</i>	624
289	THE BEAUTY OF BUNGA BINTANG HYPNOTIC AT ROYAL TOWN, PEKAN PAHANG. <i>Farah Amirah Kasimi, Ramly Hasan, Wan Azlina Wan Ismail, Nor Hamizah Hamid, Yeo Lee Bak, & Nor Diana Aziz</i>	625
290	SOLVING THE SOIL DEPOSITION THROUGH THE SUSTAINABILITY OF RESILIENCE DRAINAGE SYSTEM AT BUKIT KELUANG BEACH, BESUT, TERENGGANU <i>Ahmad Huzairah Aminuddin, Wan Azlina Wan Ismail, Ramly Hasan, Nor Diana Aziz, & Mohd Azri Mohd Jain Noordin</i>	626
291	DEVELOPMENT OF POSTURE CORRECTOR DEVICE WHILE SITTING FOR DISCOMFORT PROBLEMS AMONG OFFICE WORKERS <i>Darlina Mohamad, Azmul Fadhli Kamaruzzaman, Nooraziah Ahmad, Hana Yazmeen Hapiz, Mohd Yusri Mohd Naser</i>	627
292	EXPERIENCE THE NATURE VIA SMART 'SEGAR AMAT' BRIDGE AT RECREATION PARK <i>Tan Vie Khuen, Wan Azlina Wan Ismail, Ramly Hasan, Nor Diana Aziz, &</i>	630

	<i>Mohammed Fadzli Maharimi</i>	
293	REMEMBERING CULTURE ACTIVITY FOR THE USER AT PANTAI SRI TUJUH, TUMPAT	632
	<i>Nik Nabila Nik Mat, Wan Azlina Wan Ismail, Ramly Hasan, Nor Diana Aziz, & Mohammed Fadzli Maharimi</i>	
294	DEVELOPING ICONIC LANDMARK OF GREEN CURTAIN TOWER AT KOLAM HIJAU COMMUNITY PARK	634
	<i>Raja Faerull Asraf Raja Alim, Ramly Hasan, Wan Azlina Wan Ismail, Muhamad Hilmi Mohamad @ Masri, & Nor Diana Aziz</i>	
295	ADAPTIVE PRAYER WEAR FOR IMMOBILE MUSLIM WOMEN	636
	<i>Sarah Wahida binti Hasbullah, Siti Nurul Diana binti Sukri, Mohd Zaimuddin bin Mohd Zain, Hana Yazmeen binti Hapiz, Azlin Sharina binti Abdul Latef, Mohd Hafiz bin Drahman, & Nurul Syahida binti Mat Hussin</i>	
296	OMNI: TOOTHBRUSH DESIGN FOR DOWN SYNDROME CHILDREN	638
	<i>Hana Hapiz, Yuhanis Ibrahim, Sarah Wahida Hasbullah, Azlin Sharina Abdul Latef, Ainul Wahida Radzuan, Suraya Sukri, Mohd Zaimuddin Mohd Zain, Nuzul Hakimi Muhammad</i>	
297	GAPURA: APPLICATION OF 3D TECHNOLOGY VISUALISATION IN CONSERVING HERITAGE BUILDING OF ISTANA BALAI BESAR	641
	<i>Siti Aisyah Muhammad, Azli Bin Abdullah, Yasmin Binti Mohd Faudzi, Ahmad Nizam Aiman Bin Mohd Pauzi, Normaisarah Binti Mohd Rosdi, & Muhammad Arib Muzakkir Bin Mohd Salleh</i>	
298	FLUX: A MODULAR 3D PRINTED FURNITURE JOINERY SYSTEM	644
	<i>Muhamad Ezran Zainal Abdullah, Nor Hamizah Abdul Hamid1, Jarfrulhizam Jaafar, Mohd Hilmi Harun, Siti Nurul Diana Sukri, Mohd Firuz Mohd Anwar, Darliana Mohamad, & Nooraziah Ahmad</i>	
299	GERBANG KOLEK: FASHIONING AN ICONIC UMK GATEWAY	646
	<i>Juliza Mohamad, Muhammad Rizal Khairuddin, Azli Abdullah, Nik Nurul, Hana Hanafi, Siti Aisyah Muhammad, Nor Hafizah Anuar, Najah Md Alwi, Yasmin Mohd Faudzi, Mhd Hafiz Karami Mhd Zain, Nuzul Haqimi, & Muhammad Ismi Luqman Hamadi Ibrahim</i>	
300	IE-SMART TRACKER 3.0 (INTELLIGENT EMPLOYABILITY SMART TRACKER 3.0)	649
	<i>Khairul Azhar Mat Daud, Balakrishnan Parasuraman, & Ena Bhattacharyya</i>	
301	MODEL OF DEPRESSION, ANXIETY AND STRESS, EMOTIONAL INTELLIGENCE AND SATISFACTION OF WORK-LIFE BALANCE	650
	<i>Rogis Baker, Hassan Al-Banna Mohamed, Nur Fatimah Husna Mohamad Puzi, Nur Surayya Mohd Saudi, Haliza Mohd Zahari</i>	
302	NEW INTEGRATION MODEL OF HUMAN DIMENSIONS WITH MILITARY MINDS AND PATRIOTISM AMONG MALAYSIAN ARMED FORCES	652
	<i>Jessica Ong Hai Liaw, & Nora Ibrahim</i>	
303	INTERPRETATION OF NATURE IN LITERATURE THROUGH FILM ADAPTATION	656
	<i>Sudirman Kiffli, Nordiana Ab Jabar, Suraya Sukri, Ainul Wahida Radzuan, Farrah Atikah Saari, & Siti Nur Anis Muhammad Apandi</i>	
304	RELIGION AS PEACEBUILDING: A CASE OF SABAH SOCIAL ENVIRONMENT	658
	<i>Suraya Sintang, Romzi Ationg, Mohd Nazmi Mohd Khalli, Khadijah Mohd Khambali @ Hambali, Syamsul Azizul Marinsah</i>	
305	ESTABLISH SPATIAL STATISTICS SYSTEM DESIGN FOR POVERTY RISK ESTIMATION	661
	<i>Siti Aisyah Nawawi, Norashikin Mohd Fauzi, Amal Najihah Muhamad Nor, Norfadhilah Ibrahim, Rohazaini Muhammad Jamil, Siti Hajar Ya'acob, Wan Nur Fazni Wan Mohamad Nazarie, Rabihah Nawawi</i>	
306	BIBLIOMETRIC: JURIMETRICS TO DETERMINE REFERENCES ON LEGAL CASES IN MALAYSIA	663
	<i>Adi Aizat Yajid, Abdul Khabir Rahmat, Ahmad Ridhuwan Abdullah, Nur Syafiqah A. Samad, Norzalizah Bahari, Siti Fariha Muhamad</i>	

307	A MODELING STUDY OF THE ECONOMIC EMPOWERMENT OF WOMEN IN THE FIELD OF ENTREPRENEURSHIP IN KELANTAN <i>Zaleha Embong, Fairuz A'dilah Rusdi, Asma Lailee Mohd Noor, Wan Ahmad Amir Zal Wan Ismail</i>	665
308	FUTURE HOMES: INTEGRATION ELEMENT OF A HEALTHY HOME AND SMART SYSTEM TO ENHANCE WELLBEING FOR ALL <i>Siti Nuratirah bt Che Mohd Nasir, Salmiah bt Aziz, Nur 'Izzati bt Mohd Amin, Dr WaOmar Ali Saifuddin b Wan Ismail</i>	667
309	DEVELOPMENT OF A MODERATED FINANCIAL STRAIN MODEL AMONG HOMEOWNERS WITH THE JOB SATISFACTION-DEBT BEHAVIOUR INTERACTION <i>Husniyah A. Rahim, Zahariah Sahudin, Amirah Shazana Magli, Mohd. Fazli Sabri, Mohd. Amim Othman</i>	669
310	USE ME HEALTH RECORD (UMHR) <i>Khairunisa Nasuha Ahmad Kamal, Damia Nazifa Al Hashimi, Muhammad Akmal Hazim Fairusdzuddin & Afzanizam Alias</i>	672
311	PRINCIPLES OF RESPONSIBILITY IN THE MEDINA CHARTER TO BUILD COOPERATIVE RELATIONS OF THE CROSS-CULTURAL SOCIETY <i>Zaleha Embong, Fairuz A'Dilah Rusdi, Asma Lailee Mohd Noor, Ateerah Abd Razak, Nik Yusri Musa¹, Nur Azuki Yusuff, Noor Shakirah Mat Akhir, Nazri Muslim</i>	674
312	THE DOLLS KIT FOR EFFECTIVE INTERVIEW MAPPING STRATEGY (A MODEL FRAMEWORK) <i>Yohan Kurniawan, Mohammed Farhan Bin Md Yusof, Noor Raihani Binti Zainol, Yang Jia Qi</i>	676
PART 3: LIST OF CONTRIBUTORS STEAM		678
313	WATERPROOF FIRESTARTER FOR OUTDOOR ACTIVITY <i>Saliza Anida Salleh, Yumna Fatima Khan, Nuralya Qaisara Mohd Hashim, Aydin Shamsul, Shamsul Muhamad</i>	679
314	DRONE@SCHOOL: NARROWING DIGITAL DIVIDE, INCREASING S.T.E.M CURIOSITY <i>Noor Janatun Naim Jemali, Mohamad Radi Mohamed Rosly, Marinah Muhammad, Shaparas Daliman, Muhammad Firdaus Abdul Karim, Aqilah Abdul Rahim</i>	680
315	SYSTEMATIC SYNTHETIC PHONICS: AN EVALUATION OF THE EFFECTIVENESS OF USING THE JOLLY PHONICS PROGRAMME TO TEACH READING <i>Norfarisha Elyana Abdullah, Najihah Mahmud, Nazirah Mahmud</i>	682
316	DESIGNING AND DEVELOPING YEAR ONE SCIENCE PEDAGOGICAL MODULE BASED ON STEAM LEARNING MODEL <i>See Too Kay Shi & Assoc. Prof. Dr Ng Siew Foen</i>	683
317	WATER POLLUTION <i>Yumna Fatima Khan, Saliza Anida Binti Salleh, Mohammad Muqtada Ali Khan, Hafzan Eva Manosr, Elvaene James</i>	685
318	YOGURTINI – A BENEFICIAL YOGURT WITH NATURAL STINGLESS BEE (MELIPONINI) HONEY'S JELLY GUMMY <i>Khairinawati Binti Shuib, Nor Syawalnie Binti Ghazali, Nor Alisya Maisarah Binti Norhisham, Muhd Al-Amin Shah Bin Mohd Asmadi, Aniff Bin Affenddy, Muhammad Sabri Bin Saidi, Aniq Fahmi Bin Mohammad Zainal, Nur Alia Maisarah Binti Nawawi, Muhd Danial Irfan Bin Mohammad Zu, Nur Ainatul Amani Binti Isa, Nur Athirah Binti Mohd Sayuti, Azhaney Binti Abdullah, Azfi Zaidi Bin Mohammad Sofi Aziz, Nor Hakim Bin Abdullah</i>	687
319	PRODUCTION OF BIOGROWTH POT (BIO-G POT) FROM LOCAL AGRICULTURE WASTE FOR CROP SEEDLING APPLICATION <i>Azhaney Binti Abdullah, Aniq Fahmi Bin Mohammad Zainal, Nur Alia</i>	689

Maisarah Binti Nawawi, Muhd Danial Irfan Bin Mohammad Zu, Nur Ainatul Amani Binti Isa, Nur Athirah Binti Mohd Sayuti, Nor Syawalnie Bt Mohd Ghazali, Nor Alisya Maisarah Binti Norhisham, Muhd Al-Amin Shah Bin Mohd Asmadi, Aniff Bin Affenddy, Muhamad Sabri Bin Saidi, Khairinawati Binti Shuib, Nor Hakim Bin Abdullah, & Azfi Zaidi Bin Mohammad Sofi@Aziz

- | | | |
|-----------------------------------|---|-----|
| 320 | TRIMBOT: REMOTE CONTROL LAWN MOWER
Wan Nur Batrisyia Irwan, Muhammad Muaz Lasim, Zulaiqah Badrul Isham, Zalina Ahmad, Norulshaidah Mohamad, Raja Noor Farah Azura Raja Ma'amor Shah | 691 |
| 321 | BOM WARISAN
Al-Aqif Hafez bin Al Kamalrolzaman, Nur Iman Amani binti Khairil-Iszuddin, Fathin & A'liya binti Mohamad Jamaludin | 693 |
| 322 | EnviroMPlasc (FOOD PACKAGING FROM COCOPEAT, LEMONGRASS AND COGON GRASS)
Najwa Ariena Mohamad Azizie, Siti Nur Eleysa Maisarah Abdul Rahim, Thasni Balqis Mohammad Yusof, Nur Aqish Putri Mohd Zailani, Nur Aini Rosdi, Nor Zaihan Shamsudin | 694 |
| 323 | POTATO AS A POTENTIAL ORGANIC WATER CARRIER UTILIZED IN REDUCING SALINITY IN SALT SOLUTION
Afifah binti Abdul Azmil, Nurul `Izzan binti Abdul Razak, Muhammad Safwan Bin Khairudin, & Muhammad Azan bin Tamar Jaya | 697 |
| APPENDIX A: LIST OF JUDGES | | 699 |

ISLAMIC HFitTracker: ISLAMIC HEALTH AND FITNESS TRACKER MOBILE APPLICATION FOR HEALTHY LIFESTYLES

Mohd Fadil Mohd Yusof

Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Malaysia
fadil@umk.edu.my

Siti Salina Saidin, Nurul Hafizah Mohd Yasin, Siti Fatimah Ab. Ghaffar, Nur Farihin Abd Hadi Khan

Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Malaysia
salina.s@umk.edu.my, hafizah.my@umk.edu.my, fatimah.g@umk.edu.my, farihin.ah@umk.edu.my

Highlights: The need for digital smart health application to monitor individual health, fitness and spiritual level is one of the potential innovations to be proposed. In this app, person medical records are shared among public health institutions and the records are accessible upon approval from the users. In the case of emergency, the person records are readily accessible through their smart phone with all the details. With such details, medical doctors are able to provide efficient and relevant treatment to the patients. The app may also provide information on the health tips and prevention, the do's and the don'ts in keeping up a healthy lifestyle in accordance to the practice of Islamic traditions.

Key words: *digital health, application, mobile health, health prevention, Islamic healthy lifestyles, digital literacy*

Introduction

The advance of information and communication technologies has changed the landscape of our society nowadays. The access to the internet and digital devices particularly mobile phones is also increasing rapidly. The internet and digital device are tools that are commonly used in a personal and professional activities performed by individuals. Based on the report by Statista (Johnson, 2021), there were 4.66 billions of active internet users worldwide representing almost 60 percent of global population. Around 93 percent (4.32 billion) of the internet users are accessing the internet using their mobile devices. In Malaysia, the percentage of households having access to the internet is reported at almost 99 percent (Bernama, 2021). The access to the mobile phones and computers also reported at the same rate of 99 percent. As reported by Chief Statistian, Uzir Mahidin, Malaysians are using the internet mostly or social networks. It is also reported that there is an increasing trend for Malaysians to search for information related to education and demand for e-health, e-government and entertainment (Koh, 2020). Against this background, the target users for this app will be middle class society and above who can access to the internet and mobile app. Market will be segmented by age profile such as young, middle age and senior citizens.

Product Description

Based on this interesting trend, it is expected that the demand for both digital health services and fitness tracker is promising. As such, an integrated mobile app is proposed, with added value of Islamic lifestyle content. The app is to cater not only general health-conscious users but especially users who belong in the Muslim community. The application will help both community segments to track personal healthy routine in an Islamic way, mainly to follow the Prophet Mohammed SAW's example to mankind, up to His traditions in health matters.

The Islamic Health and Fitness tracker mobile app primarily contain features such as self-assessment of personal health and fitness, along with advices related to a healthy lifestyle that follow the sunnah of the Prophet Muhammad SAW. The app is expected to be handy for users to note down and record their health information in the log. Therefore, this mobile app is a great medium for health and fitness conscious community, whether the users are interested in learning Islamic health, fitness and dietary tips, or searching for a practical mobile log of their health record. The app is expected to be developed using app development software and can be run on both android and iOS devices. "Everything good that happens to you (O Man) is from God; everything bad that happens to you is from your own actions". (Quran 4:79).

The Islamic Health and Fitness tracker mobile app is proposed to have the following components:

1. Users' self-completion of demographic information and other details related to medical and medication records such as previous diagnoses, vital signs, medications currently taken, immunisation dates, allergies and other relevant reports.
2. Other than health records, the app also may provide suggestions of indoor or outdoor fitness activities which tailored to a specific user's age and demographics.
3. Food and nutritional intake advices, as well as Sunnah diets as practiced by the Prophet Muhammad saw.
4. Sharing of prayers related to health, based on authentic hadiths.
5. Interactive medium for information sharing to selected social media networks permissible by users

A password will be assigned to registered users, in order to access the application. However, not all components are free to be accessed. Certain features are available upon subscription and to be renewed on yearly basis. The information provided in the app is strictly confidential and can only be accessed by the users or their immediate family members upon approval. However, information sharing is entirely up to users' permission. The information can only be shared to any third party such as the government health institutions or trusted private health upon request from the user in the mobile apps.

Contribution

This app will not only help to educate the community on physical and emotional wellness, but also the users' spiritual wellness. For physical wellness, users will learn about how to choose and prepare nutritious food and maintain active lifestyle by implementing correct indoor or outdoor fitness activities.

Whereas, for emotional wellness, this app will indirectly help to motivate users to maintain their good emotional state. Physical activities reduce levels of the body's stress hormones and stimulates the production of endorphins, that are the body's natural painkillers and mood elevators.

This app is also designed to educate the community on spiritual wellness, the knowledge on healthy lifestyle based on sunnah diet and lifestyles. Authentic hadiths and traditions are compiled and easily accessed by the users whenever and wherever needed. For instance, this app will remind the users about their daily prayers related to health and well-being. Therefore, this app will be a useful tool to educate the community on physical, emotional, and spiritual wellness.

Advantages

1. This mobile app allows users to track health data over time because users can retrieve their own health record and see the trend of their health status including fitness and nutritional status over the previous year. It will motivate them to take their preventive steps and modify their lifestyle according to sunnah diet and lifestyles.
2. Furthermore, this app will remind the users about their important health appointment such as preventive screening or checkups. Early detection of disease especially cancer during regular checkup will help the user to obtain early intervention for their disease.
3. This mobile app also helps the users share their health information with the trusted healthcare providers, namely, specialist, hospital, nursing home in the same state or even across the country. However, users' data on this app could not be sold to pharmaceutical and insurance companies because the information is shared in a secure way. The data could be accessed only after obtaining users' permission.

Commercialization Potential

1. Target population especially for Muslim— about 32, 776,114 Muslim in Malaysia in 2021 could be potential to be user for this apps.
2. Muslim population from other country – it is estimated about 1.907 billion Muslim around the world. It is expected to benefit more users around the world.
3. For the basic system, the cost is very cheap and for intensive system the cost is acceptable for medium level of business, therefore, the profit expected to be higher since this application only need experts in the field and marketing cost.

Research Novelty

First mobile application targeting Muslim that covered medical history tracking and others health application to ease medical consultation, save time and money. It is important for modern Muslim to use this app to monitor their health and maintain their well-being with health guideline from Quran and Sunnah. As following verse "Everything good that happens to you (O Man) is from God, everything bad that happens to you is from your own actions". (Quran 4:79). We believe Quran and Sunnah as a complete guideline especially in maintaining health, but this app will ease users to understand and apply the guideline in simple and easy steps.

References

- Bernama. (2021). Internet Access Usage Increased To 91.7% In 2020 — DOSM. Theedgemarkets.Com. [https://www.theedgemarkets.com/article/internet-access-usage-increased-917-2020—dosm#:~:text=KUALA LUMPUR \(April 12\)%3A,Statistics Malaysia \(DOSM\) today.](https://www.theedgemarkets.com/article/internet-access-usage-increased-917-2020—dosm#:~:text=KUALA LUMPUR (April 12)%3A,Statistics Malaysia (DOSM) today.)
- Johnson, J. (2021). Global Digital Population As Of January 2021. Statista.Com. <https://www.statista.com/statistics/617136/digital-population-worldwide/#:~:text=As of January 2021 there,the internet via mobile devices.>
- Koh, D. (2020). An Overview Of Malaysia's Digital Health Landscape. Healthcare IT News. <https://www.healthcareitnews.com/news/apac/overview-malaysia-s-digital-health-landscape>
- World Population Review, Muslim Population by Country (2021), Accessed on 20 June 2021 from <https://worldpopulationreview.com/country-rankings/muslim-population-by-country>