UNIVERSITI TEKNOLOGI MARA
Cawangan Melaka

i-JaMCSIIX 2022

International Jasin Multimedia & Computer Science Invention and Innovation Exhibition

ABSTRACT BOOK

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Contents

Registration ID	Project Title	Page
JM006	Hiding Information Digitally Under Picture (HIDUP) Using Image Steganography	1
JM007	Target Heart Rate Zone Detector during Exercise based on Real-time Facial Expression using Single Shot Detection Algorithm	2
JM009	Learning Shapes and Colours using JomLearn & Play Application for Children	3
JM010	A Novel Quality Grading Determination using Boxplot Analysis and Stepwise Regression for Agarwood Oil Significant Compounds.	4
JM011	A Novelty Classification Model for Varied Agarwood Oil Quality Using The K-Nearest Neighbor Algorithm	5
JM012	The Development of Web-Based Student Leadership Program Management System for 'Unit Kepimpinan Pelajar'	6
JM013	MARC 1.0: Apps to integrate culture the fun way in a university orientation programme	7
JM014	Re: Gen - Web-based Resume Generator With Content Recommender For It Job Field	8
JM015	Zakat Distribution System for Asnaf Selection using Artificial Neural Network Algorithm in UiTM Cawangan Melaka	9
JM017	Jasin Smart Library	10
JM019	Nursery Plants Recommendation System Using Collaborative Filtering Technique	11
JM020	An Interactive Android Mobile Application in Learning Wudhu and Salah for Children with Learning Disabilities	12
JM021	Absolute Fitness	13
JM022	The Library	14
JM023	Dashcam with cloud storage using raspberry pi with FFmpeg video compression	15
JM024	Gold Price Forecasting by Using ARIMA	16

JM025	Recycle Now: Learning the 3R of Waste Management Through Game-Based Learning	17
JM026	Learning Corpse Handling for Primary School Students using Game-Based Learning	18
JM028	Mathematical Learningmate For Children With Dyscalculia	19
JM029	BC-DIGIT: An Interactive Digital Application	20
JM030	Energy Consumption Prediction In Educational Building During Lecture Week using Multiple Regression Model	21
JM031	Go Travel Application	22
JM032	SmartPark	23
JM033	iKEN 3D Environment Mobile Application	24
JM034	Click Car Services	25
JM035	Smart Vector Backpack	26
JM036	My Ole-Ole Application	27
JM040	SH Jacket	28
JM041	FemaleSafe2Go	29
JM042	Avalyn	30
JM043	MyConvenient Travel Application	31
JM044	Visnis Apps	32
JM045	Cyclo Application	33
JM046	i-seeuWatch	34
JM047	ArenaSport Application	35
JM048	Melastomaceae sp : A New Potential of Antioxidant Agent	36
JM049	Travesy	37
JM051	The Food Hunter	38
JM052	NIXON PACK	39
JM053	Ecoin Sustainable Smartwatch	40

JM054	SpaceBook	41
JM055	Prayer Mate Jacket	42
JM056	Backpack Hoodie	43
JM057	"Cintre Multifunction"	44
JM058	Phone Holder Multifunction 3 In 1	45
JM059	Business Financial Forecasting System Using Autoregressive Integrated Moving Average (ARIMA) Algorithm	46
JM060	Kesho Bearer	47
JM061	Nafas Face Mask	48
JM062	Handy Scrubby	49
JM063	Beanie Shawl	50
JM064	POMCUT (Portable Multi-cooking Utensil)	51
JM065	4 in 1 Tumbler	52
JM066	Multifunctional Holder	53
JM067	Visualizing the spread of Coronavirus disease using a Density-based Clustering Algorithm	54
JM068	Developing Biometric Facial Registration For Jobfinder Mobile Application	55
JM069	Development of Virtual Kenong with Leap Motion Controller	56
JM070	EYE DISTANCER DEVICE	57
JM071	Fuzzy Delphi Method Analytical Tool: An Excel VBA-Based Approach	58
JM072	Understanding Social Media Influence In Reviving The Trishaw Or “Beca” As A Popular Tourism Attraction In Melaka.	59
JM073	Non-immersive Virtual Reality for Learning Steps of Umrah: Effect from Covid-19 Pandemic	60
JM074	First Aid Stick	61
JM075	Istiqamah App by As-Sunnah Global Ventures Sdn Bhd	62
JM077	SWARM-L : Security Warning Area Mode of Liquifaction	63

JM078	T-LOBSTER : Transformation of Local Batik Motifs Central Sulawesi for the World	64
JM079	The IoT-based instrument for conservation law of mechanical energy	65
JM080	Web Application for Clustering Potential Earthquake Region in Central Sulawesi	66
JM081	Let's Read!	67
JM084	Anxiety Disorder Management System (ADMS)	68
JM085	A Guide to Water Purification	69
JM086	Bright Gas Distribution Information System Design Pertamina by Applying the Distribution Method Requirement Planning (DRP)	70
JM087	Detection of Flight Data Anomalies Based on Automatic Dependent Surveillance-broadcasting	71
JM088	Classification of Formalin Fish Based on Color Characteristics of Fish Eye Images Using Artificial Neural Network Algorithm	72
JM089	Coco-pine Bioplastic	73

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Recycle Now: Learning the 3R of Waste Management Through Game-Based Learning

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JM025 – Innovation – Local – Category C: Students - UiTM Melaka

***Abstract*—Reduce, reuse and recycle (3R) is the general principle of recycle that used in every country. This general principle helps to keep the environment tidy and clean. However, study is shows that people still lack awareness and knowledge about recycling. Thus, the purpose of this study is to design a 3D role-playing (RPG) for learning 3R, to develop a 3D in game-based learning. This project is use Rapid Application Development (RAD) approach as it is most suitable and provide a fully guideline to develop this game successfully. This game also uses Game-Based Learning Model which is Magic Circle Model. The project game also evaluated based on respondents from Usability Questionnaire that consists of two factor perceived usefulness and perceived ease of use. Findings of this game projects shows 78% of the overall total mean and shows that it has been reached it level of usability of educational computer games in game-based learning. In order to have a better playing experience for the future work, adding more challenging and mission for this game would be a good way to improve the quality of the game.**

Keywords—recycling, 3R, 3D, RPG, game-based learning