**ABSTRACT**

The developed system entitled “JoRex: An Artificial Intelligence (AI) Motion-based Fruit Razor Computer Game**”** was developed in a window-based computer. It used Python as programming language and flat file database in storing player’s data. Specifically, it aimed to discuss the process of detecting and tracking the movement of the sword; design the algorithms used to randomly select objects such as fruits, bombs, and bonus points and object’s location; use flat file database in storing player’s information such as name and score; test its accuracy in terms of cutting objects, adding corresponding points, generating scores, and tracking the coordinates of sword’s location, and test its user-friendless through the design of its graphical user interface. To evaluate the extent of satisfaction of the respondents in using the developed system, the researchers used Mean and percentage distribution. When tested, the respondents strongly agreed that the developed system was accurate in cutting objects like fruits and bombs (3.84) and user-friendly in terms of its distinct features (3.62) and graphical user interface (3.88). It was highly recommended that the developed system should be installed in mobile devices and be played online, improve the sword’s detection, should be played using hands not sword, and lastly, to add more fruits to make the game more exciting and attractive.