Assessment 3: Python group project

Demonstration and online submission; week 23 (on 21/03/2022); 10% - group project

Feedback within 15 working days

Students will be working in pairs to write code related to a Python project. The final version of their software will be demonstrated to the instructors at week 23.

Students will have to write Python code for creating a pacman based game using tkinter or any other python gui based module.

You will be marked based on the design and complexity of game mechanics, as well as the use of programming tools beyond those explained in class. Additional grades are awarded for complexity regarding the animations.

Final assessment will be done in the class in week 23. You will be allocated a 10-minute slot on that day to demonstrate and talk through your code during the class. We will mark your presentation and code to award you a grade on the Middlesex 20 point scale. No presence in a given time slot will result in fail mark.

Summarising, project 3 will be assessed based on quality of final submission, and knowledge demonstrated during the live presentation, according to the rubric below.

Project 3 evaluation rubric

Item	1-4	5-8	9-12	13-16	Fail (17-20)
Code 35 %	High quality code exhibiting deep knowledge and creativity	Code shows structure, understanding of programming tools and personal initiative	Code shows some personal initiative and good understanding of basic concepts	Code works, but is mostly based on given examples with little personal contribution	Code does not work, and shows little understanding of language/algorithms
Documentation 10 %	Advanced comments and documentation	Satisfactory comments and documentation	Basic but correct documentation and comments	Poor documentation and comments	Missing or minimal comments or documentation
Animations 25 %	Highly creative and varied animations using a range of techniques used to achieve this	Game is creativity and well designed	Game contains a range of obstacles/enemies	Some slight effort applied into the overall appearance of the game	Minimalistic Pacman design
User interface 15 %	All of the features mentioned previously, and additional signs of creativity, including a menu screen with usable controls	Keyboard interface with previously mentioned features and various player information visible on screen (score/lives/game duration)	Basic (e.g. mouse movement viable, keys visble)	Very basic (e.g. with movement keys visble)	No interface
Presentation 15 %	Very good and organised demonstration	Careful demonstration of code and user guide	Demonstration is clear but not very organised	Basic explanation of code and animations	No clear explanation, lack of understanding

Technical information

Technical Requirements

- Multi-threading along with other programming techniques learnt throughout your course should be applied
- Pacman must have three lives
- A score counter should display the points a player accumulates
- When a player uses up their three lives, you should allow them to save their high score, this information should be saved locally
- There should be “enemy” ghosts in the game who follow your Pacman
- Extra marks to be awarded for additional game features and creativity

For anyone unfamiliar with Pacman I have attached a video.

https://www.youtube.com/watch?v=dScq4P5gn4A