CGP2004M Computer Graphics and Games Programming – Assignment 2

Learning Outcome	Criterion	Pass	2:2	2:1	1st
[LO1] Apply appropriate mathematical/algorithmic techniques for 2D and 3D graphics.	Game animation has been implemented appropriately. (25%)	Sprite animation is simply taken as sprite motion, i.e. changing X, Y coordinates of an image.	Sprite animation is done using multiple image files and no timing events.	Sprite animation is provided using timer events to move through a SpriteSheet. Different motions of the sprite are represented with different sprites from the spritesheet.	3D Models are incorporated into the game. Models can be moved/rotated/translated in accordance with the game mechanics.
	Game interactivity (5%)	A simple game control interface has been developed. This is cumbersome and can't be altered.	A game control interface is provided which uses the keyboard for control. This can't be modified.	A game control interface is provided which allows for control of the game in an intuitive way with the keyboard. This can't be altered.	A game control interface is provided which allows control of the game using the keyboard or Xbox 360 controller. This is intuitive and can also be remapped by the user.
[LO3] Implement efficient algorithms for computer games programming	Implement collision detection for game objects. (30%)	An attempt at collision detection has been made but this is inaccurate and collisions are not handled correctly.	A basic model of collision detection has been implemented using AABB however this isn't 100% accurate and false positives are generated.	A good collision detection algorithm has been implemented using AABB or Spheres (Circles for 2D). This is accurate and false positives are minimised.	An excellent collision detection algorithm has been implemented that is both efficient and accurate with false positives at a minimum. This uses collision trees or OOBB.
	Implement an accurate collision response model. (15%)	Collision response model is not correctly modelled, largely as a result of incorrect collision detection.	Collision response is implemented but seems not to act according to natural physics.	A good collision response model is provided which allows for two objects to respond accordingly when a collision is detected.	A collision response model is provided which gives accurate (physics) response when two objects collide. Or responds according to the game mechanics.
[LO4] Design and develop games software using appropriate games and graphics programming techniques and standard graphics libraries	Write a Games Document detailing the premise, aims, changes and instructions for a selected game. (10%)	A very minimalist games document is provided. This does not say anything about the aims of the game or what the requirements are. In addition the instructions for playing are not clear.	A games document is provided that gives a brief description of the game, but does not mention the aims in any detail. The instructions for playing the game are not clear.	A games document is provided that outlines the premise of the game. A set of requirements are listed in terms of what is needed to develop the game. The instructions for play are clear.	An excellent games document is provided that gives a clear description of the outline of the game, the aims are clearly presented and a list of requirements is detailed well. The instructions for playing the game are clear and intuitive. Modifications to the original game are clearly identified.
	Sound is provided in the game for background and interaction. (10%)	No background sound has been provided, and the interaction sounds do not occur based on game mechanics, but rather seem random.	Background music has been applied but this is so loud that any other sounds cannot be heard.	Background sound has been applied and is set appropriately (using the desired tools) to give a good sound level. Other interactive sounds have been included but do not always play in correct place.	Background sound has been applied and is set appropriately (using the desired tools) to give a good sound level. Other game sounds have been included that fire with appropriately timed events.
	A menu system and	No HUD is provided and only a	A simple HUD is provided but	A HUD is provided which includes	A full HUD is provided which includes

	HUD has been implemented. (5%)	basic 'Start Game' menu option is provided.	the lives and health bars do not appear to correspond to game mechanics.	lives and health. A game menu is provided which has a 'Restart Game' option.	lives, health and scoring system. A menu is provided which allows for game pause, restart and exit.
Weighting	All criteria are weighted as shown by the percentages indicated in the relevant criterion box.				