CAB202 Assignment 1 Marking Criteria

Student name: **Student number:**   **Marker:**

AMS: Compile program [pass or fail]

Compiles successfully.	**pass/fail**
Executable runs and starts the game.	**pass/fail**

Level 1: Basic functionality [15 marks total]

Game starts initialised correctly (player position correct, 10 aliens in any configuration, information panel with score = 0 and lives = 3).	**/ 3.0**
Spacecraft moves with left and right keys ('a' and 'd' respectively). Stops at the boundaries of the screen.	**/ 2.0**
Spacecraft shoots bullet with 's' key. No bullet can be shot until the current bullet goes off screen.	**/ 2.0**
Aliens start in the correct configuration and move horizontally from left to right.	**/ 2.0**
As each individual alien moves off screen, it reappears instantly on the left (configuration does not change).	**/ 0.5**
Aliens drop bullets every 3 seconds, no more than 4 at the same time.	**/ 2.0**
Lives decrease, player moves back to middle, and all bullets disappear when ship is hit.	**/ 0.5**
When a player's bullet hits an enemy, it disappears and the score increases by 30.	**/ 1.0**
When all enemies are dead, the score increases by 500 and all enemies reappear.	**/ 1.0**
When the player's lives get to 0, game over screen shown with choice to restart or quit.	**/ 0.5**
Can restart or quit at any time.	**/ 0.5**
TOTAL	**/ 15.0**

Level 2: Harmonic motion [2 marks total]

Aliens move up and down in an oscillatory motion.	**/ 1.0**
Aliens average vertical position does not change with the oscillatory motion.	**/ 0.5**
When alien wraps from right edge of screen, harmonic motion continues where it was.	**/ 0.5**
TOTAL	**/ 2.0**

Level 3: Falling motion [2 marks total]

Aliens move to the bottom of the screen, reappearing with the same vertical position when wrapping from the right edge.	**/ 1.0**
When aliens reach the bottom of the screen, they reappear at the top with the same horizontal position.	**/ 0.5**
If alien hits the player, both player and alien die, player respawns in a safe position.	**/ 0.5**
TOTAL	**/ 2.0**

Level 4: Drunken motion [3 marks total]

Each alien has its own individual, randomly defined, horizontal motion	/ 1.0
No alien ever moves into a position directly adjacent to another	/ 0.5
Random behaviour is biased so that the aliens expand and spread out	/ 1.0
Same vertical behaviour as level 3 (wrapping, same horizontal position, death behaviour if an alien hits the human)	/ 0.5
TOTAL	**/ 3.0**

Level 5: Aggressive motion [5 marks total]

After a random delay, 1 alien starts to move to the edge of the group	/ 0.5
No more than 1 alien is ever individually moving at a given time	/ 0.5
Correctly travels a path to the edge that collides with no other aliens	/ 0.5
Parabolic path is travelled from the edge to where the player's ship is	/ 1.0
Parabolic path has a randomly determined horizontal displacement	/ 1.0
Ship can shoot curved bullets with 'z' and 'c' key presses	/ 0.5
Curvature of ship shots increases with duration key is held down	/ 1.0
TOTAL	**/ 5.0**

Bonus: Game runs on any screen dimensions [3 marks total]

Score panel demonstrates dynamic alignment	/ 0.5
Ship (can't move outside) and aliens (wrap instantly) correctly resize to screen limits	/ 0.5
Levels 2 and 3 adjust correctly with screen size (i.e. nothing ever crosses score panel)	/ 1.0
Levels 4 and 5 adjust correctly with screen size (i.e. parabolas contort correctly, all collision conditions are still met	/ 1.0
TOTAL	**/ 3.0**

Final mark

Extras (must be at least as hard as features of level 4 or 5, capped at 3 marks max)	/ +3.0
Errors unaccounted for in marking scheme (please explain somewhere below)	/ ∞
FINAL ASSIGNMENT TOTAL	**/ 30.0**