CS 176
Programming Assignment 1

This assignment is a refresher assignment on the Input Manager and Game State Manager, Object Manager and Collision Manager. The estimated time for completion is about six hours.

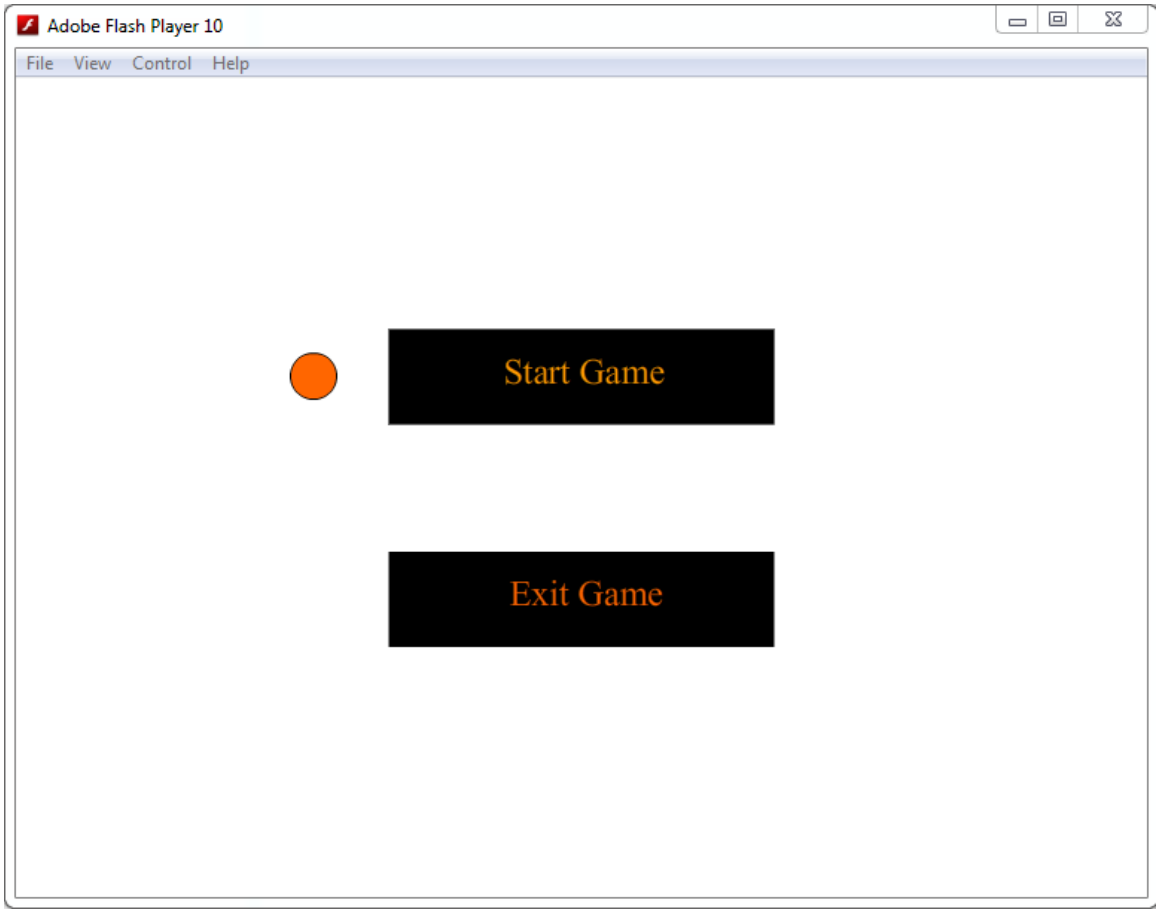
You will be given all the needed assets and engine classes. It is up to you to use those classes in order to implement the gameplay portion of the code.

Details

Game Logic Details:

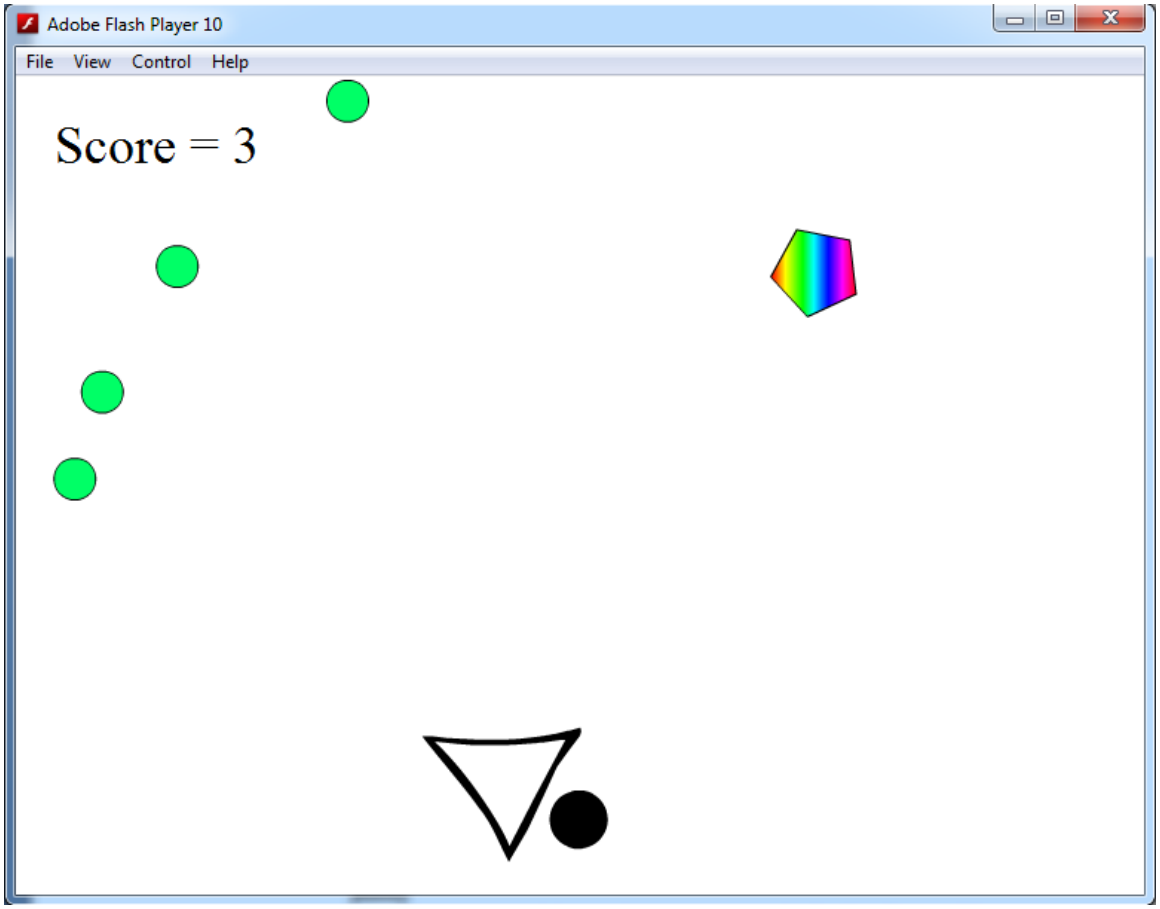
Two levels have to be implemented (MainMenu and Level1). Below is a description for their behavior.

Main Menu



- ***In the MainMenu, three MovieClips have to be shown (StartGame , ExitGame and SelectioButton)***
- ***The player uses the "UP" and "DOWN" keys in order to change the selection between the two***
- ***Pressing the "Space" bar will switch us to a different level (of course depending on the user's selection)***

Level 1



- ***Level 1 behavior:***
  - ***Objects:***
    - ***Turret:***
      - ***Rotates with the "Left" and "Right" arrow keys***
      - ***Has a limit on rotation (-90 to 90)***
      - ***Shoots bullets in the right direction when triggering space***
    - ***Enemy:***
      - ***Is randomly generated at y = 50 every 50 frames.***
      - ***Moves towards the turret***
      - ***Has a random speed between 5 and 10***
      - ***Gets destroyed if collides with a bullet or if it goes off the screen***
    - ***Bullet:***
      - ***Moves in the direction specified by the ship***
      - ***has a constant speed 5***
      - ***Gets destroyed if it collides with the enemy or goes off the screen***

- ***Score goes up by one if bullet collides with an enemy***
- ***Game goes to MainMenu if enemy collides with the turret***
- ***Pressing "R" at any time restarts the level***
- ***Pressing "M" at any time takes us back to MainMenu***

PS: Check the given swf file for more details or to play the game

Code Details:

You will be given an already made but very primitive engine containing the following:

- ASEngine.fla (Contains the art assets and linked to Main.as"
- Main.as
- Engine Folder:
  - CollisionInfo.as
  - CollisionManager.as
  - Game.as
  - GameObject.as
  - GameStateManager.as
  - InputManager.as
  - ObjectManager.as
  - State.as
- GamePlay Folder:
  - GamePlayGlobals.as
  - MainMenu Folder
    - MainMenu.as (which is the starting state)

It will be up to you to use all those resources in order to implement the game.

Note:

- **You are not allowed to change any of the Engine files.**
- **Again, you are only allowed to add your as files inside the "GamePlay" folder. You are free to add as many ".as files" as you want as long as you don't touch the Engine files or "Main.as".**
- **Level1 files should be added in a Level1 folder.**

Comments

In this and future assignments, you are required to include:

- **A file header comment in every piece of source file. The format is shown in the "Comments.as" file given to you in the beginning of the semester and should be present at the very top of all your code.**

- **Function header for each function you create. The format is shown in the "Comments.as" file given to you in the beginning of the semester and should be present at the top of every function.**

- **Inline commenting for your code.**

What to submit

You must submit the "ASEngine v1.0" folder in a single .zip file named correctly (go to the class page on moodle and you will find the assignment submission link). **Do not change the hierarchy of the files inside it. Do not submit any other files than the ones listed.**

If you've forgotten how to submit files, the details are posted in the syllabus and in the assignment guidelines document. Failure to follow the instructions will result in a poor score on the assignment (and possibly a zero).

Special note:

The due date/time posted is the positively latest you are allowed to submit your code. Since the assignments can easily be completed well before the deadline, you should strive to turn it in as early as possible. If you wait until the deadline, and you encounter unforeseen circumstances (like being sick, or your car breaking down, or something else), you may not have any way to submit the assignment on time. Moral: **Don't wait until the last day to do your homework.**