**CSE212: software development methodologies**

**Yeditepe University**

**Spring 2017**

**term Project – Due Date May 12nd, 2017**

As term project you are required to develop a single player Jet Fighter game similar to 1990s arcade game *Raiden Fighters 2*. Your application should be able to keep scores of users and store them on a file. For this purpose, the users should be required to register with a login name and a password, and to log in prior playing the game.

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| --- | --- |
| 1.PNG | 4.PNG |
| (a) | (b) |
| Fig. 1: (a) Welcome Screen; (b) Login screen | |

You can use the following statements and figures as a guideline:

* For usability purposes, you are required to implement a graphical user interface (GUI) for your application.
* Your application should have a welcome screen (see Fig. 1a) which will contain a task menu (*File, Help*).
* The Help menu should have only one item called Credits (*Help->Credits*), which should pop up a window containing student details.

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| --- | --- | --- |
| C:\Users\KPERENTE\Desktop\2.PNG | C:\Users\KPERENTE\Desktop\3.PNG |  |
| Fig. 2: Example Jet Fighter game screenshot | |  |

* In the case of a *Registration* request (*File->Register*), a window should pop-up to collect the user details (*username; password*). *You might also consider collecting some additional information here, such as screen name, age, gender etc*.
* When a user would like to play the game (*File-> Play Game*) s/he should be forwarded to a login screen (see Fig. 1b), where s/he is asked for username and password.
* As can be seen in the example screenshots (Fig. 2), the player should be able to see the number of lives left in the game on the bottom left side of the screen.
* The game should keep score for every enemy jet that is hunted and eventually calculate the players overall score.
* The players should be able to see the score board using menu item Scoreboard (*File->Scoreboard*)
* The player should also have menu item called Quit (*File-Quit*) to exit from the application.
* The game that you have developed should have at least two levels of difficulty (Novice, Intermediate). The novice level should have at most three enemy fighters. On the other hand, in the intermediate level the game should have at least four enemy jets and an enemy ground vehicle (tank).
* The enemy vehicles (tanks and jets) should have at least some level of intelligence so they can dodge and avoid the missiles fired from the player’s jet.
* The player’s jet should be able to fire at least two types of ammunition (missiles and laser beams). Laser beams should on last for 5 seconds and should take at least 30 seconds to charge back.
* The background of the game could be either static picture of mountains or see, or could be dynamic (BONUS 10 points) with a look and feel of an actual jet.
* Jets hit by rockets could either disappear from the screen, or they could explode, with the help of a sequence of images (BONUS 10 points).
* You can google for Raiden Fighter Sprites to find images and frames for the game.
* You can find a tutorial on sprites here : <http://zetcode.com/tutorials/javagamestutorial/movingsprites/>
* A tutorial on different game concepts can be found in here: <http://zetcode.com/tutorials/javagamestutorial/>
* An example jet fighter game video can be found at this location (<https://www.youtube.com/watch?v=juSsaT5CEI0>)

**Submit your assignments in a rar file, which has your name\_surname\_studentNumber as name, using COADSYS by the end of Friday, May 12nd, 2017. All submitted source files will be check for plagiarism - among classmates and with any existing open source code available on the Internet. Furthermore, all students will be required to demonstrate their work for 15 minutes. DO NOT submit somebody else’s work.**