Assignment 3

Object oriented programming IT308G – Spring term 2018

School of Informatics, University of Skövde

1. Assignment

Your assignment is to write a console application which works with a high score list that is saved on the hard-drive The elements in the list are names of players with the respective scores they got in an unspecified game. The user should be able to:

1. Display the elements of the list on the command line
2. Add a new player name with a respective high-score to the list
3. Reset the list

The high score list can have five high scores at most, which should be the five elements with the highest scores, since the list was last reset. See Figure 1 and Figure 2 for an example.

```
Welcome to the highscore list program

---HighScore menu---
1. Insert new item
2. Print list
3. Reset list
4. Quit
Please make your choice and press enter:1

Please enter name:Elsa
Please enter score:1901
Elsa with score 1901 was added to the list.

---HighScore menu---
1. Insert new item
2. Print list
3. Reset list
4. Quit
Please make your choice and press enter:1

Please enter name:Felix
Please enter score:67
Felix with score 67 was added to the list.

---HighScore menu---
1. Insert new item
2. Print list
3. Reset list
4. Quit
Please make your choice and press enter:2

---The highscore list---
1.          Elsa        1901
2.          Arne        1208
3.          Anders      78
4.          Felix       67
```

Figure 1 Example

```
5.          unknown    0

---HighScore menu---
1. Insert new item
2. Print list
3. Reset list
4. Quit
Please make your choice and press enter:3

The highscore list has been reset.

---HighScore menu---
1. Insert new item
2. Print list
3. Reset list
4. Quit
Please make your choice and press enter:2

---The highscore list---
1.          unknown    0
2.          unknown    0
3.          unknown    0
4.          unknown    0
5.          unknown    0

---HighScore menu---
1. Insert new item
2. Print list
3. Reset list
4. Quit
Please make your choice and press enter:4

Thank you for using the highscore list.
```

Figure 2 Example

Please note that this is an individual assignment where you need to follow your own plan to create your program. This means you are expected to create all of the content you are submitting. It is ok to discuss with other students about your ideas and get help from others to get better understanding, however in the end all material you are submitting needs to be created by you. Plagiarism of the code or other material is prohibited

2. Requirements

Requirements to get a pass on this assignment are:

- The assignment is solved
- At least two classes have been created and used (for example HighScoreItem and HighScoreList)
- Encapsulation has been used
- Writing to and reading from a file has been used
- Exception-handling has been used
- The abstraction level of the code is appropriate, the functionality division across the code parts is reasonable
- The code is readable, easy to understand and has appropriate structure
- Methods and variables have appropriate names (use English)

- The code is commented (use English)

3. Submission

The assignment shall be submitted via SCIO at the dedicated assignment location in the course page. All files should be submitted via a single compressed (zip) file. The file should have the name OOP2018_login_assignment3.zip, where the login is your login name, for example a17abcde.

4. Assessment

The assignment gives the Grade U (fail) or G (pass). To get a G grade, all requirements should be fulfilled.