

## Homework 2

Upload your source code file from *DEUZEM SAKAI* until **December 20, 2020, 23:55**.

Upload only a single \*.cs file.

The name of the file: **number\_name\_surname.cs**

For example: 2019510028\_ali\_yildirim.cs



Write a C# program for the following card game.

Assume that there is a card array with nine slots.

Each *slot* includes a letter between A and D (A, B, C, D) in one of the three colors (red, blue, and green).

The array must contain 3 cards in red color, 3 cards in blue color, and 3 cards in green color.

The player gets some score, depending on the letters and their colors that land along with the array.

- If the consecutive three slots show the same letter in the same color, he/she gets 33 points i.e. (A A A) or (B B B) or (D D D)
- If the consecutive three slots show the same letter in different colors, he/she gets 28 points i.e. (A A A) or (D D D)
- If the consecutive three slots show the same letter, but not all the same or different color, he/she gets 22 points i.e. (A A A) or (D D D)
- If the consecutive three slots show consecutive letters in the same color, he/she gets 18 points i.e. (B C D) or (D B C) or (A C B)
- If the consecutive three slots show consecutive letters in different colors, he/she gets 16 points i.e. (B C D) or (C B A) or (B D C)
- If the consecutive three slots show consecutive letters, but not all the same or different color, he/she gets 14 points i.e. (B C D) or (C B A)
- If the consecutive three slots show the same color, but not all the same letter and not consecutive, he/she gets 12 points i.e. (A B D)
- If the consecutive three slots show different colors, but not all the same letter and not consecutive, he/she gets 10 points i.e. (A A D)
- Otherwise, he/she gets 0 points

Write a program that randomly generates the array and then prints the score the player gets.

After that, the program should ask the user whether he/she wants to play again or not. According to the choice of the user, the game should be repeated or over.

### High Score Table

The high-score-table contains the top-10 game scores of all time.

The high-score-table must be read from the text file and inserted into the *high-score array(s)*.

Read the unsorted text file "D:\\HighScoreTable.txt" and create a sorted array(s) in decreasing order:

If he/she gets a score within top-10 results, he/she must be inserted into the high-score array(s).

If the same score exists in the table, the new score should be inserted to the next of them.

Pelin;80
Kaan;16
Ali;50
Yeliz;96
Cem;40
Can;35
Ece;10
Sibel;70
Remzi;100
Nazan;12

At the end of the game, the new score table should be written to the same file.

### Sample output:

Randomly generated array: A C B A A A B C D

A C B 16 points  
C B A 16 points  
A A A 22 points  
A B C 14 points  
B C D 14 points

A C B A A A B C D  
...  
...

You get 82 points !!!

Please enter your name: Ayda

High Score Table  
Remzi 100  
Yeliz 96  
Ayda 82  
Pelin 80  
...  
Nazan 12

Do you want to play again? (Y or N)  
N

This homework will be graded by Res.Asst. Elife ÖZTÜRK KIYAK.

You can ask your questions to her from the "FORUM → Homework 2 - Questions" part of the *DEUZEM SAKAI* software.

### Notes:

1. You should use meaningful variable names, appropriate comments, and good prompting messages.
2. If you want, you may write your own "procedures / functions".
3. Your program must work correctly under all conditions. Try to control all possible errors.
4. If you are late, your grade will be decreased 10 points for each day. After five days, your assignment will not be accepted.
5. Assignment must be your individual work. **Cheating** is strictly prohibited. If any cheating occurs, your assignment will be graded with **zero (0)**. A software will be used to automatically detect the similarities between all the source-codes of all the students.