

## Homework 2

Upload your source code file from DEUZEM SAKAI until December 24, 2023, 23:55.

Upload only a single \*.cs file.

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

For example: 2015510028\_ali\_yildirim.cs

The homework evaluation will be done by Assoc. Prof. Dr. Kokten Ulas BIRANT (for any questions; please contact him through "ulas.birant@deu.edu.tr")

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Write a C# program for the following card game;

Assume that there are couples to define a card. (First part of a card is a letter between A and E (A, B, C, D, E) and second part of a card is a number between 1 and 4 (1, 2, 3, 4) to specify different colors.) (Example; A3) Each gamer's card set includes exactly 10 cards. (Different cards are separated with " " (Space))

The file includes each gamer's card set in different lines. (The file stores at most 10 players.)

At the start of the game; the content of the file "gamers.txt" will be read to the array(-s). (There will be no user input required through keyboard)

At the end of the game; the points will be calculated and will be written on the screen.

RULES OF SCORE;

The player gets some score frame by frame, depending on the letters and their colors that land along with the array(-s). (The gamer will get only the best score for a triple.)

- If the consecutive three slots show the same letter in the same color, he/she gets 33 points. For example; (A1 A1 A1) or (B4 B4 B4)
- If the consecutive three slots show the same letter in different colors, he/she gets 28 points. For example; (A3 A2 A4) or (D1 D2 D4)
- If the consecutive three slots show the same letter, but not all the same or different color, he/she gets 22 points. For example; (A1 A1 A2) or (D2 D2 D4)
- If the consecutive three slots show consecutive letters in the same color, he/she gets 18 points. For example; (B1 C1 D1) or (D3 B3 C3)
- If the consecutive three slots show consecutive letters in different colors, he/she gets 16 points. For example; (B1 C2 D4) or (C3 B4 A1)
- If the consecutive three slots show consecutive letters, but not all the same or different color, he/she gets 14 points. For example; (B1 C1 D3) or (C2 B3 A3)
- If the consecutive three slots show the same color, but not all the same letter and not consecutive, he/she gets 12 points. For example; (A1 B1 D1)
- If the consecutive three slots show different colors, but not all the same letter and not consecutive, he/she gets 10 points. For example; (A1 A3 D2)
- Otherwise, he/she gets 0 points.

Sample "gamers.txt";

A3 B2 A1 C1 D1 C2 E1 A3 B2 E1

E2 C3 B3 A3 E2 E1 A1 A4 B1 A2

A1 E2 C1 D4 B1 A1 E2 D4 A1 D3

About process;

1. Sample file contains card sets of 3 gamers. (Maximum gamer number is 10.)
2. Sample score calculation for sample file; For gamer1; 1<sup>st</sup> evaluation: "A3 B2 A1", 2<sup>nd</sup> evaluation: "B2 A1 C1", 3<sup>rd</sup> evaluation: "A1 C1 D1", 4<sup>th</sup> evaluation: "C1 D1 C2", ... (Evaluation will be done frame by frame from the array.)
3. The decks may contain a card several times. Different gamers may have same cards.
4. The game starts without any user input through keyboard.

Important notes;

1. Your program must work correctly under all conditions. Try to control all possible errors.
2. You should use meaningful variable names, appropriate comments, and good prompting messages.
3. If you are late, your grade will be decreased 10 points for each day. After five days, your assignment will not be accepted.
4. 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 students' source-codes.