

ICS4 – Review Assignment

Topics: Grade 11 Course Review

Due Date is always by 11:59PM on the date of submission

Marking

We will be looking for a number of things for this assignment. **Remember that just because your program works does not mean you will get full marks; this is actually only a portion of the final mark for the question.**

- **Style**
 - Documentation (Header, variables, inline(block) comments)
 - Structure (Indentation, white space, code location)
 - Decisions (Variable naming, documentation descriptions, data types)
 - Visual appeal and ease of use to the user
- **Correctness**
 - Does your program perform as requested and expected

Academic Integrity

Plagiarism and other acts of academic dishonesty will be dealt with in accordance to the school's rules. Talking about questions is allowed, this is called collaboration. **Copying/Using/Giving code from/to friends or others sources is considered cheating.** To ensure you do not cross this line; when talking about a question with someone do so away from a computer with a paper and pen in hand and write our **IDEAS**, not code. Then when you are finished talking return to your computer and implement the **ideas**, you have come up with.

Follow the instructions below to get started...

- Create a new Visual Studio C# Project named **A1_Review** in the **ICS4/Assignments/A1_Review** folder
- When you are done, select the **A1_Review** folder then click **File→Send To→Compressed (zipped) folder**, submit the resulting .zip file on the Moodle.

Time Management

The purpose of this assignment is to bring you back up to full speed in terms of your programming knowledge. When done this project you will have used all of the fundamental programming concepts learned in the grade 11 course. Use your time wisely and choose the application that is right for you.

Documentation

You are expected to have full documentation in your programs, see the Moodle for help if you forget the guidelines. Essentially you need you headers, subprogram, variables and block comments.

Marking Scheme

Criteria	Mark
T/I: Visual Design (visual appeal and ease of use to the user)	/ 5
K/U: Coding choices were logical and efficient	/ 10
App: Implementation (Works with no errors with key game mechanics intact)	/ 20
Comm.: Coding Style (Clean and well documented code including proper spacing)	/ 20

The Game of Elevens

This project is to be completed as a Console program only. Your job is to program a fully playable version of the game Elevens. Elevens is a very simple single player card game played with a standard 52 card deck. The deck is shuffled and then 12 cards are put on the playing area face up in two rows of six cards.

The remaining 40 cards are your deck that you will play with. The goal of the game is to have every one of the 12 piles with a face card on top. Face cards are the picture cards, Jack, Queen and King. All other cards have a value equivalent to the number on the card, with Ace being worth 1.

Gameplay is straight forward, in the beginning of the game there are currently 12 piles with one card on each pile and your 40 card deck. The player has two play options only to play the game. If there are two piles which have top cards that add to 11 you can take two cards from the deck and place one card on top of each pile. For example, in the following setup:

```
A 5 9 J 10 3
K 2 8 A K 4
```

In this setup you can see we have many combinations of piles that add to 11. A+10, 9+2, 3+8, and another A+10. Choose one set at a time and place a deck cards on top of each of the two piles. Notice that the card suit does not matter, so much in fact that I did not even display it. All you need to know is that there are 4 of each card in the deck.

The second move the player has the option to do is to Move a face card. This option is typically only used when there are no more remaining 11 pile pairs. To perform this action the player must choose a pile that only has one card on it, which is a face card, all other face cards are not valid choices. The player then takes that face card and puts it on the bottom of the deck, and the card on top of the deck is put on the now empty pile. Play continues until all piles have a face card on top (a win) or the player is out of move options (a loss). Give appropriate feedback to the user when needed. Your user interface should feel smooth and not intrusive to gameplay.