

# ICS 3M1 - Computer Science (Java)

## Selection & Repetition Assignment

1. Write a program which will ask the user to input their choice from a selection of 5 holidays, then outputs a greeting that is appropriate for that holiday. You may use any holidays or special occasions that actually exist and that you are familiar with. Use a switch statement and validate the entry. The user may enter their choice of holiday via a menu (eg. 1 for Thanksgiving).
2. Write a program which asks the user for the number of students in a class. Ask the user what the mark entered will be out of (example, a test may be out of 30). Now, allow the user to enter the mark for each student. Indicate the grade (based on the chart below). Delay between each student entry. After all students have had their mark entered, indicate what the class average is. (Hint: You will have a for statement, do/while statement, if statement, and switch statement in this program).
  - A 80 - 100
  - B 70-79
  - C 60 - 69
  - D 50-59
  - F below 50
3. Write a program that will calculate the total cost of attending the Mississauga Fall Fair for a group. You must determine the cost of the grounds entry tickets (children, youth and seniors: \$12; adults: \$15). You must also determine how many all-play tickets are required (for the ride/games area - \$10), ensuring that you do not ask for more than the number of entry tickets you have requested (but it could be less or zero). Ask the user if they have a discount coupon (which gives 10% of the total price for the group). Display the cost of the group for entry to the Mississauga Fall Fair. Note: there are no taxes charged. (Hint: Use constants for all ticket prices, use appropriate control structures and validation).
4. Have the computer randomly generate a number between 1 and 100. Ask the user to guess the number. If the user is too low or too high indicate this to the user with an appropriate comment. After the user has guessed the right number, inform them of how many times it took to make a correct guess. Allow the game to be played over and over again until a guess of -999 is entered to end the game. Do not display 'too low' when a -999 is entered.
5. Write a program that will allow you to simulate the game of Craps. Craps rolls two dice, and the following is considered:
  - 7 or 11 on the first roll wins
  - 2, 3, or 12 on the first roll loses
  - any other first roll is called the 'point' - to win on a point you must roll your point againThe program should print messages telling you what you rolled and if you won, lost, or had points and must roll again. For every win of a 7/11 give the player 200 points. For every point win give the player 100 points. For every loss give the computer 100 points. Continue the game until either the user or the computer reaches 1000 points. Continue to notify the user of their score between each 'game.'