



جامعة بيرزيت
BIRZEIT UNIVERSITY
COMP231 – Advanced Programming
Assignment # 1

Objectives:

1. To understand basic problem solving techniques using Java Programming Language.
2. To declare Java primitive data types. Also to obtain input and display output.
3. To be able to use arithmetic and use different control structures (Decision making and Loops).
4. To be able to use and manipulate Arrays in Java.
5. To develop reusable code that is modular, easy to read, easy to debug, and easy to maintain.

Specification

Submission: **Online through Ritaj.**

What to submit: Your **OWN** well-structured and well-commented JAVA files (.java) (compressed into a studentId_sec#.rar file, e.g. 1234567_sec1.rar).

Deadline: **12/03/2016** by midnight. (The online submission will be disabled after this time).

Tasks

Task 1: **Tic-Tac-Toe** game

Code an interactive, two-players game of **Tic-Tac-Toe**.

Hint: You may use a 2-dimensional array of **chars**.

The following is a sample program run:

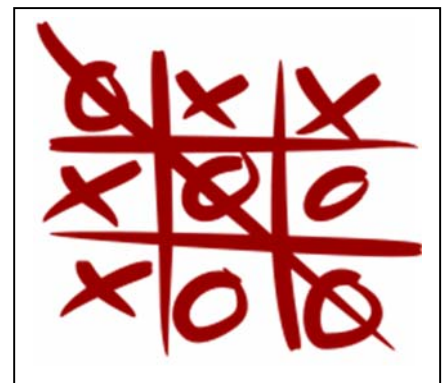
```
(...a game already in progress)

  X  O
  O X X
   X O
'o', choose your location (row, column): 0 1

  X O O
  O X X
   X O
'X', choose your location (row, column): 2 0

  X O O
  O X X
  X X O

The game is a tie.
```



Task 2: [Craps](#) game

(*Game: craps*) Craps is a popular dice game played in casinos. Write a program to play a variation of the game, as follows:

Roll two dice. Each die has six faces representing values 1, 2, ..., and 6, respectively. Check the sum of the two dice. If the sum is 2, 3, or 12 (called *craps*), you lose; if the sum is 7 or 11 (called *natural*), you win; if the sum is another value (i.e., 4, 5, 6, 8, 9, or 10), a point is established. Continue to roll the dice until either a 7 or the same point value is rolled. If 7 is rolled, you lose. Otherwise, you win.

Your program acts as a single player. Here are some sample runs.

```
You rolled 5 + 6 = 11
You win
```



```
You rolled 1 + 2 = 3
You lose
```



```
You rolled 4 + 4 = 8
point is 8
You rolled 6 + 2 = 8
You win
```



```
You rolled 3 + 2 = 5
point is 5
You rolled 2 + 5 = 7
You lose
```



Good Luck!