Activity 01

1. (3 points) Explain the key differences between dictionary, set and array.

Ans: Arrays are ordered collections of values. Sets are unordered collections of unique values. Dictionaries are unordered collections of key-value associations.

1. (3 points) Explain the annotations @IBOutlet and @IBAction. When do we use @IBOutlet and @IBAction?

Ans: @IBOutlet is a button can be used to manipulated the class and An IBOutlet is for hooking up a property to a view when designing your Button

@IBAction IBActions are used for "actions", what happens when i click on this button and used for action purpose.

1. (3 points) Write a function which takes an array of type double and returns the average of an array.

**Ans:**

**func** average(nums: Double...) -> Double {

**var** total = 0.0

**for** i **in** nums {

total += Double(i)

}

**let** count = Double(votes.count)

**var** average = total/count

**return** average

}

1. (16 points) Create a project in XCode with the project name as “**LastName\_DiceGame**” LastName is your last name.
2. You need to create a dice game application by taking names of the two players as an input.
3. When you click on the “Roll a dice” button, your app needs to generate a random number and assign it to each player. The range of random number is from 1 to 6 inclusive.
4. Compare the random numbers of two players and print the output as below.
   1. Both the players have same random numbers, then print “The game is tie”
   2. Otherwise, print the winner with highest random value.

Following screenshots are of a sample app design with all the three cases:

