# COMSATS University Islamabad, Abbottabad Campus Department of Computer Science

**LAB #14**

# Object Oriented Programming Class: BSE- 3 A & B

Q1. Write a java program that implements a multi-thread application that has three threads. First thread generates random integer every 1 second and if the value is even, second thread computes the square of the number and prints. If the value is odd, the third thread will print the value of cube of the number.

Q2. Write a java program for to solve producer consumer problem in which a producer produce a value and consumer consume the value before producer generate the next value. Write a java program for to solve printer synchronization problem in which all the jobs must be completed in order.

Q3. Write a program to create a class MyThread in this class a constructor, call the base class constructor, using super and starts the thread. The run method of the class starts after this. It can be observed that both main thread and created child thread are executed concurrently.

Q4. Create a multithreaded program by creating a subclass of Thread and then creating, initializing, and staring two Thread objects from your class. The threads will execute concurrently and display Java is hot, Programming language and also run programs to the console window.

Q5. Write a program that takes a string from the user and counts number of words, upper case letters, lower case letter and special characters and display the summary report.

Q6. Write a program that prints the input string in reverse form.

Q7. Write a program that converts capital letters of the given string in small and small letters in capital.

Q8. Write a program that input a string and a Direction **D** (**F** or **R)** and also an integer variable Position

**Pos.** Your Program should change string according to the **Pos** and **D.** For example if **D** is Given as

**'F'** and **Pos** as **2** then add **2** in each of the character of the string e.g **'Hello'** should change into

**'jqnnq'** else if **D** is given as **'R'** then subtract 2 and output would be **‘fcjjm’**.

Q9. Take a string from the user and also an integer variable **Move.** Your program should be able to move characters to the back according to the value of **Move** given by the user.

e.g Input:

String: Computer Move: 3

Output:

terCompu

Q10. Write a program that takes a string from the user and add ASCII code of each character of the s tring and check the sum of the ASCII code of the characters is even or odd e.g.

Input : 'AB' Output: 131 odd