# COMSATS University Islamabad, Abbottabad Campus Department of Computer Science

**LAB #7**

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

Q1. Create a class 'Degree' having a method 'getDegree' that prints "I got a degree". It has two subclasses namely 'Undergraduate' and 'Postgraduate' each having a method with the same name that prints "I am an Undergraduate" and "I am a Postgraduate" respectively. Call the method by creating an object of each of the three classes.

Q2. A boy has his money deposited $1000, $1500 and $2000 in banks-Bank A, Bank B and Bank C respectively. We have to print the money deposited by him in a particular bank. Create a class 'Bank' with a method 'getBalance' which returns 0. Make its three subclasses named 'BankA', 'BankB' and 'BankC' with a method with the same name 'getBalance' which returns the amount deposited in that particular bank. Call the method 'getBalance' by the object of each of the three banks.

Q3. Lets create a bank account. Create a class named 'BankAccount' with the following data members 1 - Name of depositor

2 - Address of depositor 3 - Type of account

1. - Balance in account
2. - Number of transactions

Class 'BankAccount' has a method for each of the following

1 - Generate a unique account number for each depositor

For first depositor, account number will be 1000, for second depositor it will be 1001 and so on 2 - Display information and balance of depositor

3 - Deposit more amount in balance of any depositor 4 - Withdraw some amount from balance deposited 5 - Change address of depositor

After creating the class, do the following operations

1. - Enter the information (name, address, type of account, balance) of the depositors. Number of depositors are to be entered by user.
2. - Print the information of any depositor.
3. - Add some amount to the account of any depositor and then display final information of that depositor
4. - Remove some amount from the account of any depositor and then display final information of that depositor
5. - Change the address of any depositor and then display the final information of that depositor 6 - Randomly repeat these processes for some other bank accounts and after that print the total number of transactions.

Q4. Write a program to create a class named shape. In this class we have three sub classes circle, triangle and square each class has two member function named draw () and erase (). Create these using polymorphism concepts.

Q5. Write a program in JAVA to show a delegate report regarding the printer usage of two departments. Report consists of total pages has been taken by each department and total pages taken by each individual faculty member and at the end of the month how many pages in total has been taken from the printer.

Report should look like as:

# Department of Computer Science Total # of Pages taken:????

Faculty member 1 has taken:???? Faculty member 2 has taken:????

Faculty member 3 has taken:???? And so on

**Department of Mathematics Total # of Pages taken:????** Faculty member 1 has taken:???? Faculty member 2 has taken:????

Faculty member 3 has taken:???? And so on

# Total Pages taken from the printer:??????