**CHRIST (Deemed to be University)**

**Bangalore-29**

**Department of Computer Science**

**CAT-2 DATE:26-11-2020 TIME:11AM-01PM**

Design a interface **Bank** with the following members

**Member Functions:** CreateAccount( ) - > Creating new Account for the particular bank

Deposit (double amount), Withdraw (double amount),Getbalance( ),GetAnnualInterest ( ) -> Returns Annual Interest Rate

Design a three class called SBI, HDFC and ICICI which implements from BANK interface **(Assume that each bank have different interest rate**) with the following members

**Data Members:** Bankid, Branch, Location

**Member function:** SetMonthlyInterest ( ) ->Set Different monthly interest rate for each bank

Design a class Person inherits from above three class (SBI or HDFC or ICICI) with the following members

**Data Members:** PersonId, Name, Account Number, TypeofAccount, Email

**Member functions:** AccountDetails () -> Display the following details for the each account holders

PersonId, Name, Bankid, Bankname, Balance, AnnualInterest **(Note that AnnualInterestRate is a percentage,e.g., like 4.5%. You need to divide it by 100)**

The program should have the following features

1. Create user defined exception called Insufficientbalance whenever user withdrawing amount more than his/her balance.
2. Convert account holders name from lowercase to uppercase except first character (Note: First character should be capital letter)
3. Display the person name who is having maximum amount in the particular bank (use math class)
4. Use of **exception** wherever possible

Note: You can add additional functions in the classes wherever required.

**Evaluation Criteria**

Execution = 10 marks Format=5 marks Viva=5 marks