**Q1. Create a class called Accounts which has data members like ACCOUNT no, Customer name, Account type, Transaction type (d/w), amount, balance**

**D->Deposit**

**W->Withdrawal**

**If transaction type is deposit call the credit(int amount) and update balance in this method.**

**If transaction type is withdraw call debit(int amt) and update balance**

**Pass the other information like Acount no,name,acc type through constructor**

**call the show data method to display the values.**

**Q2. Create a class called student which has data members like rollno, name, class, SEM, branch,**

**int [] marks=new int marks [5](marks of 5 subjects )**

**Write a method called displayresult, which should calculate the average marks**

**If marks of any one subject is less than 35 print result as failed**

**If marks of all subject is >35 but average is < 50 then also print result as failed**

**If avg > 50 then print result as passed.**

**Pass the details of student like rollno, name, class, SEM, branch in constructor**

**Write a Display Data method to display all values.**

**Q3.** Create a class called furniture which has Data Members like

* OrderId
* OrderDate
* FurnitureType
* Qty
* TotalAmt
* PaymentMode (credit/debit card)

Furniture Type can be Chair/Cot

* Derive the Chair and Cot class from Furniture class

If Chair Class then data members are

Chair type – Wood/Steel/Plastic

* purpose – Home/office
* If Wood Chair then Wood Type would be Teak Wood/Rose Wood
* If Steel Chair then it would be Gray Steel/Green Steel/Brown Steel
* If Plastic Color would be Green/Red/Blue/White
* Rate

If Cot class then Data Members are

* Cot Type – Wood / Steel

Same Data Members defined for Wood/Steel chair will be applicable for this.

* Capacity – Single/Double
* Rate

All the classes should have GetData() to accept user input and ShowData() to display the details .

Create a Console Application to arrive at the Solution.

* Hint : Implement the solution using Inheritance Concept.

**Q4. Create a class called shapes**

**Overload the Area method that has to calculate the area of rectangle, triangle, circle, and square by passing the relevant parameters.**

**Q5. Make a student class with register no and name. Make a class Marks inherit from student. Add necessary variables. Create a method to display the marks with total, average, and the result (Pass/Fail).**

**Include interface called Sports with to state the weight of a student.**

**Finally display the complete details of a student.**

**Q6. Create a class called journey duration which accepts departure time and arrival time of train in hrs: mins: secs parameter in the constructor.**

**Calculate the total journey time by overloading the - operator**

**int journey hours=departure time - arrival time.**

**Q7. Create a class called building which has datamembers like**

**string type(Flat/Villa)**

**string capacity(2BHK/3BHK/4BHK)**

**string dimension**

**if flat store the floor number where the flat is available**

**If villa store the land dimension like 20X30,60X40,30X40 as values**

**string dateofcompletion**

**Accept all values through constructor**

**Display all values using showdata().**

**Q8. create an interface called GovtRules which defines prototype for methods like**

**1.public double EmployeePF(double basicSalary);**

**2.public string LeaVeDetails();**

**3.public double gratuityAmount(float serviceCompleted,double basicSalary);**

**Implement the interface in classes like TCS,Accenture**

**All classes should have datamembers like empid,name,dept,desg and basic salary**

**All values should be assigned through parameterized constructor**

**and data should be displayed using properties.**

**If class is TCS , 12% of basic salary of employee should go for PF and 8.33% of basic salary should go for PF as employer contribution and 3.67% of Basic Amount should go for Pension Fund from employer contribution.**

**Leave Details for TCS is**

**1 day of Casual Leave per month**

**12 days of Sick Leave per year**

**10 days of Previlage Leave per year**

**Gratuity amount : if the no of service year completed in the same company is > 5 , 1month basic salary will be deposited in gratuity amount**

**if >10 years service , 2\*basic salary=gratuity amount**

**if >20 years service , 3\* basic salary=gratuity amount**

**if < 5 no gratuity.**

**If class is Accenture ,**

**12% of basic salary of employee should go for PF and 12% of employer contribution should go to PFfrom employer contribution.**

**Leave Details for Accenture is**

**2 day of Casual Leave per month**

**5 days of Sick Leave per year**

**5 days of Previlage Leave per year**

**Gratuity amount : Not applicable**

**implement the methods accordingly and display the detailed output.**

**Q9. Create a class called BankAccount which has datamembers like AccountNumber,Name,static double balance where minimum balance should be 500,transaction type(d/c) and transaction amount.**

**Create a user defined exception called CheckBalanceException.**

**If the balance in the account is below 500 on performing withdrawal operation it should throw CheckBalanceException.**