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1BM19CS061

LAB - 4

1) Abstract Class named Shape

```
abstract class shape {
    int a = 3, b = 4;
    abstract public void print_area();
}
class rectangle extends Shape {
    public int area_rect;
        @override
    pubic void print_area() {
        area_react = a * b;
        System.out.println("The area of rectangle
                            is : " + area_rect);
    }
}
Class triangle extends Shape
    {
        int area_tri;
        @override
        public void print_area()
        {
        area_tri = (int)(0.5 * a * b);
        System.out.println("The area of triangle
                            is : " + area_tri);
    }
}
```

```
class circle extends Shape
{
  int area_circle;
    @override
  public static void print_area()
    {
      area_circle = (int)(3.14 * a * a);
      System.out.println("The area of circle
                          is : " + area_circle);
    }
}
class abs {
    public static void main(String[] args){
        rectangle rec = new rectangle();
        rec.print_area();
        triangle tri = new triangle();
        tri.print_area();
        circle cir = new circle();
        cir.print_area();
    }
}
```

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Q) Class BANK for two acc. Saving & Current

```
import java.util.Scanner;
class account {
    private String name;
    private long account_number;
    private int account_type;
    double balance;
    void set_data() {
        Scanner sc. = new Scanner(System.in);
        System.out.println("Enter Acc. Holder name:");
        name = sc.next();
        System.out.println("Enter the acc.no.");
        account_number = ss.nextLong();
        System.out.println("Choose the account type: 1n1. Saving acc 1n 2. Current acc");
        account_type = ss.nextInt();
    }
    Void get_data() {
        System.out.println("Acc. holder: "+name);
        System.out.println("Acc no.: "+account_number);
    }
```

```
int return_account_type() {
        return account_type;
    }
}
class Saving extends account
    {
        Scanner ss = new Scanner (System.in);
        double amount;
        void get_sav_balance ()
            {
            System.out.println(" Enter the Amt. to be
                                placed in your Saving Acc. ");
            amount = ss.nextDouble();
            balance += amount;
            }
    void display_sav_balance ()
        {
        System.out.println(" balance = " + balance);
        }
    void Compute_sav_interest ()
        {
        System.out.println("\n *** Calculating
                            Compound Interest ***");
        System.out.println(" Enter annual interest
                            rate ");
```

```
float rate = ss.nextFloat();
System.out.println("Enter time in years : ");
float time = ss.nextFloat();
System.out.println("Enter principal : ");
float principle = ss.nextFloat();
float CI = (float)((principle * (Math.pow
        ((1+rate/(12*100)),(12*time)
        ))) - principle);
System.out.println("The Compound Interest is:
        " +CI);

balance = balance + CI;
System.out.println("Balance after adding
        Interest : " + balance);

}
void withdrawl_sav()
{
System.out.println("Enter the amount to
        be withdrawn ");
amount = ss.nextDouble();
balance = balance - amount;
}
}
```

```
Class Current extends account
{
    Scanner ss = new Scanner ( System.in);
    double amount ;
    final double min_balance = 500 ;
    void get_cur_balance ()
      {
        System.out.println (" Enter the amount
                              to be placed in your
                              current account ");

        account = ss.nextDouble ();
        balance + = amount ;
      }
void display_cur_blnce ()
  {
    System.out.println (" Balance = " +balance);
  }
  Void compute_cur_service_charges()
    { if ( balance < min_balance)
      { {
          System.out.println(" Service tax of
                               rs. 100 shall be
                               levied");
          balance = balance - 100;
}
```

```
        else
            {
                System.out.println(" Minimum balance
                                    is maintained ");
            }
    }
void    withdrawl_curl() {
        System.out.println("Enter the amount to
                                    be withdrawn");
        amount  = ss.nextDouble();
        balance = balance - amount;
        }
}
Class   Bank {
    public  static void main(String args[])
        {
            Scanner ss = new Scanner(System.in);
            int type;
            System.out.println("Enter the bank
                                    details ");
            account acc = new account();
            acc.gset_data();
            type = acc.return_account_type();
            if( type == 1)
                {
                    System.out.println(" SAVINGS
                                    ACCOUNTS");
                    acc.get_data();
```

```
Saving sav = new Saving();
sav.get_sav_balance();
sav.display_sav_balance();
System.out.println("Do you want to calculate
                    Interest on not \n
                    If yes press 1 else 0");
int ch = ss.nextInt();
if(ch == 1)
  {
    sav.compute_sav_interest();
  }
   sav.display_sav_balance();
   sav.withdrawl_sav();
   sav.display_sav_blnce();

}
if(type == 2)
  {
    System.out.println("Current Account");
    acc.get_data();
    current cu = new Current();
     cu.get_cu_balance();
     cu.display_cu_blnce();
     cu.compute_cu_services_charges();
     cu.display_cu_balance();
      cu.withdrawl_cu();
      cu.display_cu_balance();
}
}
```