Week 8

Shapes

Code:

```
import java.util.Scanner;
abstract class Shapes {
        int a;
        int b;
        abstract void printArea();
}
class Rectangle extends Shapes {
        void printArea()
        {   System.out.println("Area of Rectangle: "+a*b);
        }
}
class Circle extends Shapes {
        void printArea()
        {   System.out.println("Area of Circle : "+3.14*a*a);
        }
}
class Triangle extends Shapes {
        void printArea()
        {   System.out.println("Area of Triangle : "+0.5*a*b);
        }
}
public class ShapesMain {
        public static void main(String args[])
        {
```

```
Scanner sc = new Scanner(System.in);
Rectangle r = new Rectangle();
Circle c = new Circle();
Triangle t = new Triangle();
int check = 1, choice;
while (check == 1)
{ System.out.println("Enter choice : \n1) Rectangle \n2) Circle \n3)
                    Triangle \n 4) Exit");

  choice = sc.nextInt();
  switch (choice)
  {
  case 1: System.out.println("Enter length & breadth : ");
          r.a = sc.nextInt();
          r.b = sc.nextInt();
          r.printArea();

  case 2: System.out.println("Enter radius of Circle :");
          c.a = sc.nextInt();
          c.printArea();

  case 3: System.out.println("Enter height & base :");
          t.a = sc.nextInt();
          t.b = sc.nextInt();
          t.printArea();

  default : check = 0;
  }

}

}

}
```

Week 8

Bank :

```
import java.util.Scanner;
import java.lang.Math;
class Account {
    String name;
    int acc_num;
    int type;
    double balance = 0;
    void accept_deposit()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter amount to be deposited");
        float depo;
        depo = sc.nextFloat();
        balance = balance + depo;
    }
    void withdraw()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter amount to withdraw");
        float wid;
        wd = sc.nextFloat();
        balance = balance - wid;
    }
    void getData()
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter name of customer:");
        name = sc.next();
        System.out.println("Enter Account Number:");
        acc_num = sc.nextInt();
        System.out.println("Press 1 for Savings account in Press 2 for
                            Current Account");
        type = sc.nextInt();
```

```
class Savings_acc extends Account {
    void calc_ci (float t)
    {   double r = 0.05;
        int n = 12;
        double temp = balance;
        balance = balance * Math.pow ((1+r/n), n*t);
        System.out.println ("CI added: " + (balance - temp));
    }
    void display()
    {   System.out.println ("Balance : " + balance);
    }
}

class Curr_acc extends Account {
    void calc_penalty()
    {   balance = balance - 500; }
    void display()
    {   if (balance > 5000)
        {   System.out.println ("Balance : " + balance); }
        else
        {
            System.out.println ("Your account does not have minimum
balance of rs 5000, hence penalty rs 500 is being charged");
            calc_penalty();
            System.out.println ("Balance : " + balance);
        }
    }
}
public class Bank {
    public static void main (String args[])
    {
```

```
Scanner sc = new Scanner (System.in);
Account a = new Account();
Curr_acc ca = new Curr_ac();
Savings_acc s = new Savings_acc();
a.getData();
int c, choice;
float t;
c = a.type;
if (c==1)
{
    while(c==1)
    {
        System.out.println(" Enter code of your choice of actin
        :\n1) View Balance 2) Deposit Amount \n 3) Withdraw
        \n4) Exit ");
        choice = sc.nextInt();
        switch(choice)
        {
          case 1: System.out.println("Enter the number of years
                  after which balance is being checked:");
                  t = sc.nextFloat();
                  s.calc_ci(t);
                  s.display();
                  break;
          case 2:  s.accept_deposit(); break;
          case 3:  s.withdraw(); break;
          default :  c=0;
        }
    }
}
```

```
if(c==2)
{
    while (c==2)
    {
        System.out.println("Enter code: \n 1) View Balance \n 2) Deposit
                            \n 3) Withdraw \n 4) Exit");

        choice = sc.nextInt();
        switch (choice)
        {
            case 1 : ca.display(); break;
            case 2 : ca.accept_deposit(); break;
            case 3 : ca.withdraw(); break;
            default : c=0;
        }
    }
}
}
```