Abstract class of shapes

```
import java.util.Scanner;
abstract class shape;
{
    private int a, b;
    void set shape(int x, int y)
    {
        a=x;
        b=y;
    }
    int get a()
    {
     return a;
    }
    int get b()
    {
     return b;
    }
    abstract public void print_area();
}
class rectangle extends shape
{
  private int area_rect;
  rectangle(int x, int y)
   {
     Set shape(x,y);
   }
    public void print_area()
    {
     area_rect = get a() * get b();
     System.out.println("Area of rectangle :" + area_rect);
    }
}
```

```
class triangle extends shape
{
private double area_tri;
triangle( int x, int y)
{
  set shape (x,y);
}
public void print_area()
{
 area_tri=(get a()* get b())/2;
System.out.println("The area of triangle is :"+area_tri);
}
}
class circle extends shape
{
  private double area_circle;
   circle(int y)
  {
    set shape (0,y);
  }
  public void print_area()
  {
    area_circle = ((3.14)* get b()* get b());
    System.out.println("Area of Circle is :"+area_circle);
  }
}

 public class week8a
 {
 public static void main(String [] args){
    Scanner xx= new Scanner (System.in);
 int a, b;
System.out.println("Enter the length of rectangle");
  a=xx.nextInt();
```

```
System.out.println("Enter the breadth of rectangle: ");
    b=xx.nextInt();
rectangle r= new rectangle (a, b);
r.print_area();
System.out.println("Enter the height of triangle:");
a=xx.nextInt();
System.out.println("Enter the base of triangle:");
b=xx.nextInt();
triangle t= new triangle(a,b);
t.print_area();
System.out.println("Enter the radius of circle:");
a= xx.nextInt();
circle c= new circle(a);
c.print_area();
}
}
```

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Savings Account and Current account

```
import java.util.Scanner;
class Account
{
  private String name;
  private double account_no;
  private char account_type;
  private double balance;
  void getdata(char ch)
  {
    Scanner xx=new Scanner(System.in);
    System.out.print("Enter the name of the customer:");
    name=xx.next();
     xx.nextLine();
  System.out.print("Enter the account number of customer:");
  account_no=xx.nextDouble();
  System.out.print("Enter the balance of the customer:");
   balance=xx.nextDouble();
   account_type=ch;
  }
   void updatebalance(double x)
  {
     balance=balance+x;
  }
  void updatebalance1(double x)
  {
    balance=balance-x;
  }
   double getbalance()
  {
    return balance;
  }
   void displaybalance()
  {
```

```
System.out.println("The balance is :" +balance);
}
}
class Saving-Account extends Account{
    private double interest-rate;
    Saving-Account()
{
Scanner xx = new Scanner (System.in);
getdata ('S');
System.out.print("Enter the interest rate : ");
    interest-rate = xx.nextDouble();
}
 void getdeposit()
{
 Scanner xx = new Scanner (System.in);
 System.out.print ("Enter the amount to be deposited :");
  double x = xx.nextDouble();
  updatebalance.(x);
}
 void computeinterest()
{
 double x = (getbalance()* interest-rate)/100;
  updatebalance.(x);
 System.out.println("The computed interest is :" +x);
  displaybalance();
}
 void withdraw()
{
  System.out.print ("Enter the amount to be withdrawn :");
  Scanner xx = new Scanner (System.in);
  double x = xx.nextDouble();
   while (x>getbalance())
  {
```

```
System.out.println("The amount withdrawn is more than
the balance enter again : ");
x = xx.nextDouble();
}
updatebalance1(x);
displaybalance();
}
}
class Current_Account extends Account {
private double min_balance;
private int cheque_book;
Current_Account()
{
Scanner xx = new Scanner(System.in);
getdata('c');
system.out.print("Enter the minimum balance : ");
min_balance = xx.nextDouble();
}
voidgetdeposit()
{
Scanner xx = new Scanner(System.in);
System.out.print("Enter the amount to be deposited ")
double x = xx.nextDouble();
update balance(x);
}
void issuecheck()
{
Scanner xx = new Scanner(System.in);
System.out.print("Enter the amount of the check: ");
double x = xx.nextDouble();
if (x > (getbalance() - min_balance))
{
```

```
System.out.println("You have issued check of more than the
minimum balance & you have been charged the penalty of
100 rupees");
update balance1(100);
}
else
{
  update balance1(x);
}
displaybalance();
}
 void withdrawl()
{
 System.out.print("Enter the amount to be withdrawn:");
   Scanner xx = new Scanner(System.in);
 double x = xx.nextDouble();
while(x>(getbalance() - min - balance))
{
System.out.println("The amount withdrawn is more than
the balance enter again:");
 x = xx.nextDouble();
}
 update balance1(x);
displaybalance();
  }
}
public class week8b
{
  public static void main(String args[])
{
   Scanner input = new Scanner(System.in);
   Char ch;
System.out.println("Enter the type of account you want
                              (C/S):");
```

```
ch= input.next().charAt(0);
if(ch=='S' || ch=='s')
{
Saving_Account s= new Saving_Account();
int x=1;
while(x!=0)
{
System.out.println("Enter 0 for exit:");
System.out.println("Enter 1 for deposit:");
System.out.println("Enter 2 for balance enquiry:");
System.out.println("Enter 3 to calculate interest:");
System.out.println("Enter 4 for withdrawl:");
x=input.nextInt();
if(x==0)
  break;
else if(x==1)
{
 s.getdeposit();
}
 else if(x==2)
{
 s.displaybalance();
}
 else if(x==3)
{
  s.computeinterest();
}
 else if(x==4)
{
  s.withdrawl();
}
}
}
```

```
else
{
Current_Account S = new Current_Account();
 int x=1;
 while (x!=0)
{
System.out.println("Enter 0 for exit :");
System.out.println("Enter 1 for deposit :");
System.out.println("Enter 2 for balance enquiry :");
System.out.println("Enter 3 to apply for cheque :");
System.out.println("Enter 4 for withdraw :");
 x=input.nextInt();
 if (x==0)
  break;
 else if (x==1)
 {
   S.getdeposit();
 }
 else if (x==2)
 {
 S.displaybalance();
 }
 else if (x==3)
 {
 S.issuecheck();
 }
 else if (x==4)
 {
 S.withdrawl();
 }
 }
 }
 }
 }
```