

Q1)

```
import java.util.*;
class ques1
{
    public static void main(String args[])
    {
        ArrayList<String> al = new ArrayList<>();
        al.add("SuperMan");
        al.add("Batman");
        al.add("SpiderMan");
        al.add("IronMan");
        al.add("CaptainAmerica");

        for(String i:al)
        {
            System.out.println(i);
        }
    }
}
```

```
C:\Users\Aakash\Desktop\Java_Exam>javac ques1.java
C:\Users\Aakash\Desktop\Java_Exam>java ques1
SuperMan
Batman
SpiderMan
IronMan
CaptainAmerica
C:\Users\Aakash\Desktop\Java_Exam>
```



Q2)

```
class BankAccount
{
    int accno=100;
    double balance;

    BankAccount()
    {

    }

    BankAccount(int x)
    {
        System.out.println("====Welcome to LenaDena Bank====");
        accno = accno + 1;
        balance = x;
        System.out.println("Account "+ accno +" Created Successfully with
balance: " + balance);
        System.out.println();
    }

    void withdraw(int bal) throws Exception
    {
        if(bal<balance)
        {
            balance = balance - bal;
            System.out.println("Money Withdrawn : Rs" + bal);
            System.out.println();
        }

        else
        {
            throw new Exception("Withdrawn Amount Rs"+ bal +" more than
Balance");
        }
    }

    void deposit(int bal)
    {
        balance = balance + bal;
        System.out.println("Rs" +bal + " Money Deposited");
        System.out.println();
    }
}
```

```

    void show()
    {
        System.out.println("Account Number : " + accno);
        System.out.println("Balance : Rs" + balance);
        System.out.println();
    }
}

```

```

class ques2
{
    public static void main(String args[])
    {
        BankAccount ba = new BankAccount(1000);

        ba.show();

        ba.deposit(1000);

        ba.show();

        try
        {
            ba.withdraw(1000);
        }

        catch(Exception e)
        {
            System.out.println("==Invalid Input==");
        }
        ba.show();

        try
        {
            ba.withdraw(5000);
        }

        catch(Exception e)
        {
            System.out.println("==Invalid Input==" + e);
        }

        ba.show();
    }
}

```

```
C:\Users\Aakash\Desktop\Java_Exam>javac ques2.java
```

```
C:\Users\Aakash\Desktop\Java_Exam>java ques2
```

```
===Welcome to LenaDena Bank===
```

```
Account 101 Created Successfully with balance: 1000.0
```

```
Account Number : 101
```

```
Balance : Rs1000.0
```

```
Rs1000 Money Deposited
```

```
Account Number : 101
```

```
Balance : Rs2000.0
```

```
Money Withdrawn : Rs1000
```

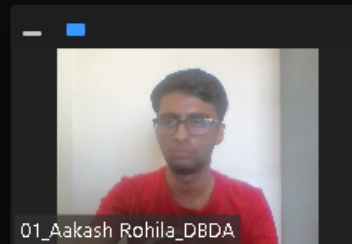
```
Account Number : 101
```

```
Balance : Rs1000.0
```

```
==Invalid Input==java.lang.Exception: Withdrawn Amount Rs5000 more than Balance
```

```
Account Number : 101
```

```
Balance : Rs1000.0
```



Q3)

```
class shape
{
    void draw()
    {
        System.out.println("I draw Shapes");
    }

    void erase()
    {
        System.out.println("I erase Shapes");
    }
}
```

```
class circle extends shape
{
    void draw()
    {
        System.out.println("I am Drawing Circle");
    }

    void erase()
    {
        System.out.println("I am Erasing Circle");
    }
}
```

```
class triangle extends shape
{
    void draw()
    {
        System.out.println("I am drawing Triangle");
    }

    void erase()
    {
        System.out.println("I am erasing Triangle");
    }
}
```

```
class square extends shape
{
    void draw()
    {
        System.out.println("I am drawing Square");
    }
}
```

```

    }

    void erase()
    {
        System.out.println("I am erasing Square");
    }
}

```

class ques3

```

{
    public static void main(String args[])
    {
        circle c = new circle();
        square s = new square();
        triangle t = new triangle();

        c.draw();
        s.draw();
        t.draw();

        System.out.println();
        System.out.println("Each subclass of shape is taking method of shape
and ");
        System.out.println("And Overriding the shapes method and making
changes accordingly at Run Time");
        System.out.println();

        c.erase();
        s.erase();
        t.erase();

        System.out.println("This is Run Time Polymorphism");

    }
}

```

```
C:\Users\Aakash\Desktop\Java_Exam>javac ques3.java
```

```
C:\Users\Aakash\Desktop\Java_Exam>java ques3
```

```
I am Drawing Circle
```

```
I am drawing Square
```

```
I am drawing Triangle
```

Each subclass of shape is taking method of shape and
And Overriding the shapes method and making changes accordingly at Run Time

```
I am Erasing Circle
```

```
I am erasing Square
```

```
I am erasing Triangle
```

```
This is Run Time Polymorphism
```

```
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```



Q4)

```
class GrandParent
{
    String grandFatherName;
    String grandMotherName;

    GrandParent()
    {}

    GrandParent(String gfn , String gmn)
    {
        grandFatherName = gfn;
        grandMotherName = gmn;

        System.out.println("GrandFather Name is : " + grandFatherName);
        System.out.println("GrandMother Name is : " + grandMotherName);
    }
}
```

```
class Parent extends GrandParent
{
    String fatherName;
    String motherName;

    Parent()
    {}

    Parent(String fn , String mn , String gfn , String gmn)
    {
        System.out.println("Father Name is : " + fn);
        System.out.println("Mother Name is : " + mn);
        Parent p2 = new Parent(gfn,gmn);
    }

    Parent(String gfn , String gmn)
    {
        GrandParent gp = new GrandParent(gfn , gmn);
    }
}
```

```
class Child extends Parent
{
    Child()
```



```

    }

    Child(String fn , String mn , String gfn , String gmn)
    {
        Parent p1 = new Parent(fn,mn,gfn,gmn);
    }

    public static void main(String args[])
    {
        Child c = new
Child("Batman","CatWoman","IronMan","WonderWoman");
    }
}

```

```
C:\Users\Aakash\Desktop\Java_Exam>javac ques4.java
```

```
C:\Users\Aakash\Desktop\Java_Exam>java Child
```

```
Father Name is : Batman
```

```
Mother Name is : CatWoman
```

```
GrandFather Name is : IronMan
```

```
GrandMother Name is : WonderWoman
```

```
C:\Users\Aakash\Desktop\Java_Exam>
```

