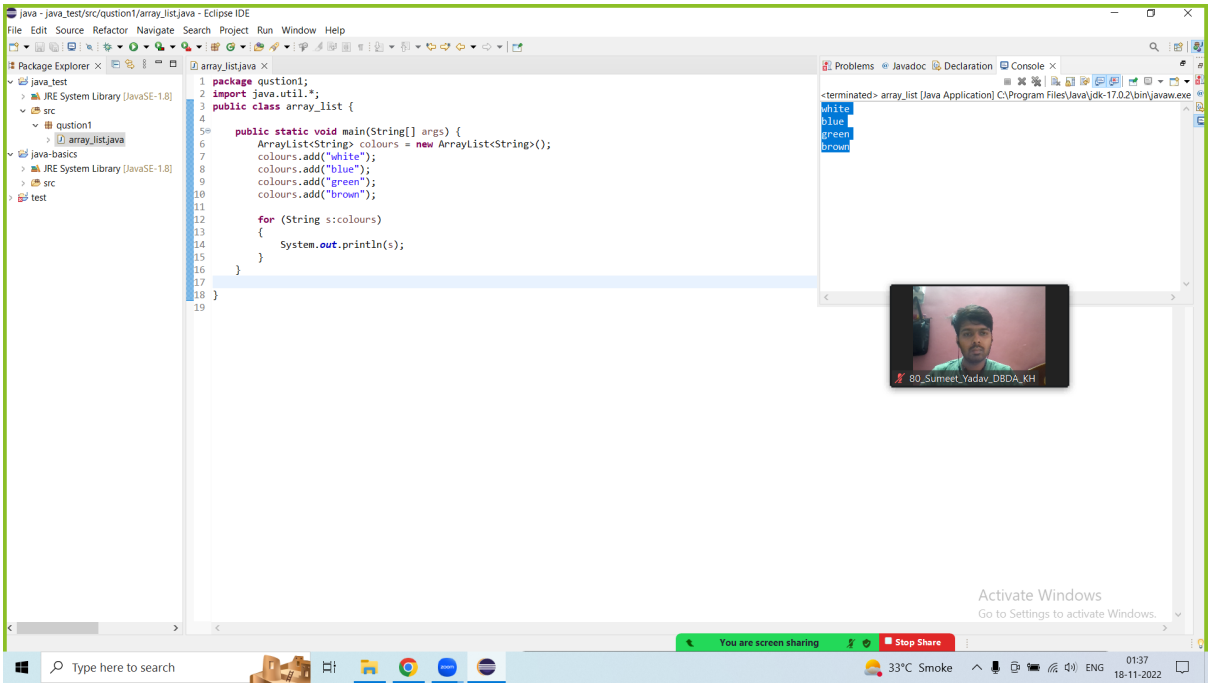
Q1 : Write a Java program to create a new array list, add some elements (string) and print out the collection by using for-each loop. (10 Marks)

Solution

```
package qustion1;
import java.util.*;
public class array_list {

	public static void main(String[] args) {
		ArrayList<String> colours = new ArrayList<String>();
		colours.add("white");
		colours.add("blue");
		colours.add("green");
		colours.add("brown");

		for (String s:colours)
		{
			System.out.println(s);
		}
	}

}
```

OUTPUT:

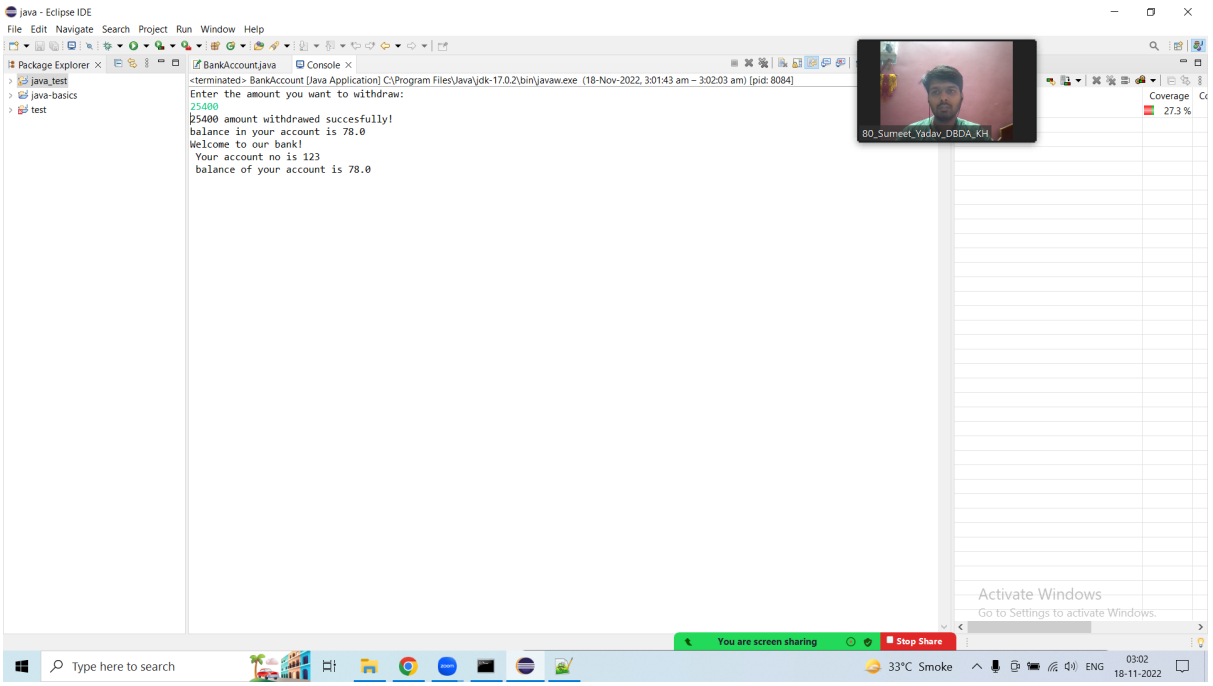


Q2 : Develop a class BankAccount having following data members : (10 Marks) int accno double balance Write appropriate constructors to initialize data members Define the following functions : withdraw : balance will reduce deposit : balance will increase show : display accno and balance If user tries to withdraw more than the balance, use exception handling code. Demonstrate the concept of exception handling in main() function

Soloution:

Output:1

Case 1 when withdrawal amt is less than balance



Case 2 : when withdrawal amount is greater than balance throws exception

Q3 : Write a program to create a class named shape. In this class we have three sub classes circle, triangle and square, each class has two member function named draw () and erase (). Create these using Runtime Polymorphism concepts. (10 Marks)

Solution:

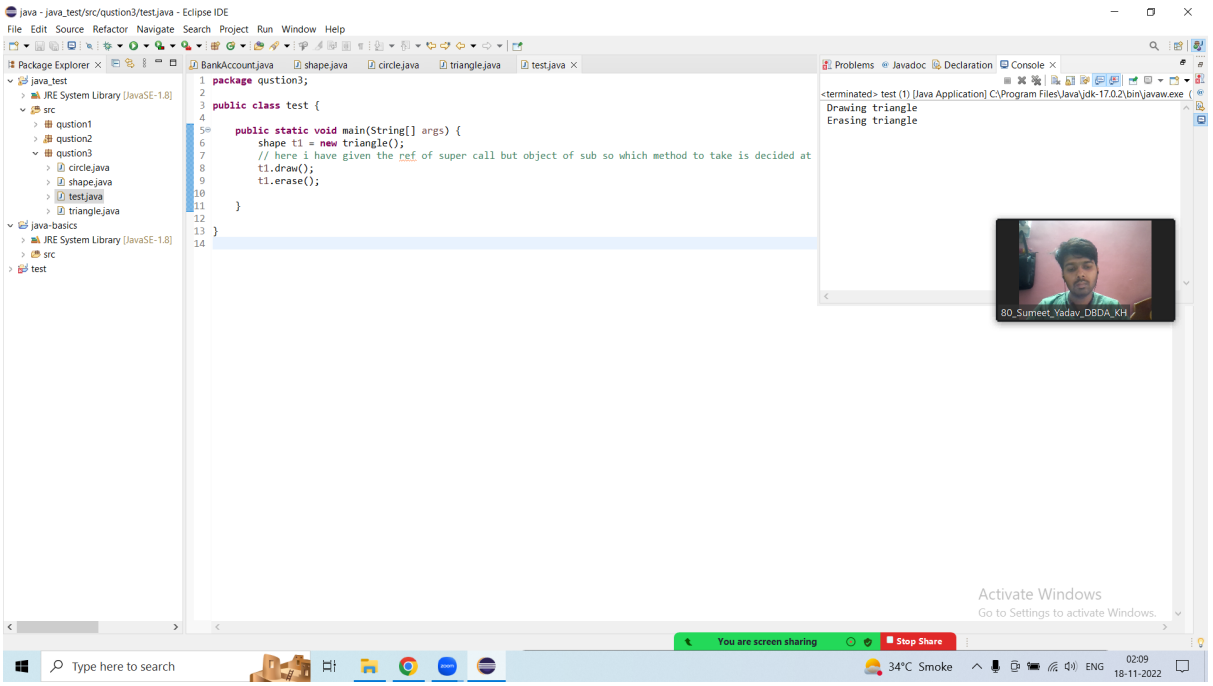
```
package qustion3;

public class shape {
	void draw() {
		System.out.println("Drawing Shape ");
	}

	void erase()
	{
		System.out.println("Erasing shape");
	}

}
```

```
package qustion3;

public class circle extends shape {
	@Override
	void draw()
	{
		System.out.println(" Drawing Circle ");
	}
	@Override
	void erase()
	{
		System.out.println(" Erasing Circle ");
	}

}
```

```
package qustion3;

public class triangle extends shape {
	@Override
	void draw()
	{
		System.out.println(" Drawing triangle ");
	}
	@Override
	void erase()
	{
		System.out.println(" Erasing triangle ");
	}
}
```

```
package qustion3;

public class test {

	public static void main(String[] args) {
		shape t1 = new triangle();
// here i have given the ref of super call but object of sub so which
 //method to take is decided at run time when obj is created
		t1.draw();
		t1.erase();

	}

}
```

Output:

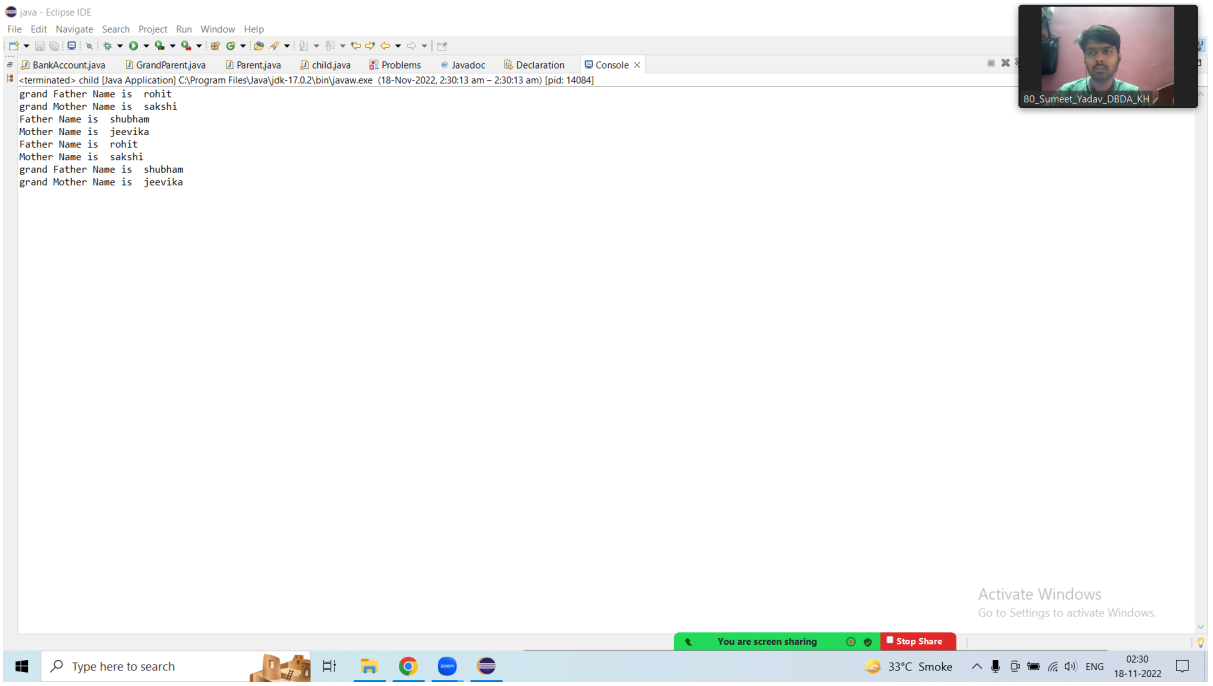


Q.4

Solution

```
package qustion4;

public class GrandParent {
String grandFatherName;
String grandMotherName;
public GrandParent(String grandFatherName, String grandMotherName) {
        this.grandFatherName = grandFatherName;
        this.grandMotherName = grandMotherName;
        System.out.println("grand Father Name is  "+this.grandFatherName);
        System.out.println("grand Mother Name is  "+this.grandMotherName);
}

}

package qustion4;

public class Parent extends GrandParent {
String fatherName;
String MotherName;
public Parent(String grandFatherName, String grandMotherName, String fatherName,
String motherName) {
        super(grandFatherName, grandMotherName);
        this.grandFatherName = grandFatherName;
        this.grandMotherName = grandMotherName;
```

```
        this.fatherName = fatherName;
        this.MotherName = motherName;
        System.out.println("Father Name is  "+this.fatherName);
        System.out.println("Mother Name is  "+this.MotherName);
}

public Parent(String grandFatherName, String grandMotherName) {
        super(grandFatherName, grandMotherName);
        this.grandFatherName = grandFatherName;
        this.grandMotherName = grandMotherName;
        System.out.println("Father Name is  "+this.grandFatherName);
        System.out.println("Mother Name is  "+this.grandMotherName);
}

}

package qustion4;

public class child extends Parent {
        public child(String fatherName,String MotherName,String grandFatherName,
String grandMotherName) {
                super(fatherName,MotherName,grandFatherName, grandMotherName);
                this.grandFatherName = grandFatherName;
                this.grandMotherName = grandMotherName;
                this.fatherName = fatherName;
                this.MotherName = MotherName;
                System.out.println("Father Name is  "+this.fatherName);
                System.out.println("Mother Name is  "+this.MotherName);
                System.out.println("grand Father Name is  "+this.grandFatherName);
                System.out.println("grand Mother Name is  "+this.grandMotherName);
        }


        public static void main(String[] args) {
                child c1 = new child("rohit","sakshi","shubham","jeevika");
                }

        }
```


java - Eclipse IDE
File Edit Navigate Search Project Run Window Help
BankAccount.java GrandParent.java Parent.java child.java Problems Javadoc Declaration Console
<terminated> child [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (18-Nov-2022, 2:30:13 am – 2:30:13 am) [pid: 14084]
grand Father Name is rohit
grand Mother Name is sakshi
Father Name is shubham
Mother Name is jeevika
Father Name is rohit
Mother Name is sakshi
grand Father Name is shubham
grand Mother Name is jeevika
80_Sumeet_Yadav_DBDA_KH
Activate Windows
Go to Settings to activate Windows.
You are screen sharing
Stop Share
Type here to search
33°C Smoke
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18-11-2022