

## practice-5.3

Code:

```
import javax.swing.JOptionPane;
import java.util.Date;

// ProductionLineDemo class
public class ProductionLineDemo {

    // Item interface
    interface Item {
        String MANUFACTURER = "OracleProduction";

        void setProductionNumber(int number);
        void setName(String name);
        String getName();
        Date getManufactureDate();
        int getSerialNumber();
    }

    // ItemType enum
    enum ItemType {
        AUDIO("AU"), VISUAL("VI"), AUDIO_MOBILE("AM"), VISUAL_MOBILE("VM");

        private final String code;

        ItemType(String code) {
            this.code = code;
        }

        public String getCode() {
            return code;
        }
    }

    // Product class implementing Item interface
    abstract static class Product implements Item {
        private static int currentProductionNumber = 1;
        private int serialNumber;
        private String manufacturer;
        private Date manufacturedOn;
        private String name;
```

```

public Product(String name) {
    this.name = name;
    this.serialNumber = currentProductionNumber++;
    this.manufacturedOn = new Date();
    this.manufacturer = Item.MANUFACTURER;
}

@Override
public void setProductionNumber(int number) {
    this.serialNumber = number;
}

@Override
public void setName(String name) {
    this.name = name;
}

@Override
public String getName() {
    return name;
}

@Override
public Date getManufactureDate() {
    return manufacturedOn;
}

@Override
public int getSerialNumber() {
    return serialNumber;
}

@Override
public String toString() {
    return "Manufacturer : " + manufacturer + "\n" +
        "Serial Number : " + serialNumber + "\n" +
        "Date : " + manufacturedOn + "\n" +
        "Name : " + name;
}
}

// MultimediaControl interface
interface MultimediaControl {
    void play();
}

```

```

    void stop();
    void previous();
    void next();
}

// AudioPlayer class extending Product and implementing MultimediaControl
static class AudioPlayer extends Product implements MultimediaControl {
    private String audioSpecification;
    private ItemType mediaType;

    public AudioPlayer(String name, String audioSpecification) {
        super(name);
        this.audioSpecification = audioSpecification;
        this.mediaType = ItemType.AUDIO; // Default type
    }

    @Override
    public void play() {
        System.out.println("Playing");
    }

    @Override
    public void stop() {
        System.out.println("Stopped");
    }

    @Override
    public void previous() {
        System.out.println("Previous track");
    }

    @Override
    public void next() {
        System.out.println("Next track");
    }

    @Override
    public String toString() {
        return super.toString() + "\n" +
            "Audio Spec : " + audioSpecification + "\n" +
            "Type : " + mediaType.getCode();
    }
}

```

```

// Random class for demonstration of GUI
static class Random {
    public static void main(String[] args) {
        if (!java.awt.GraphicsEnvironment.isHeadless()) {
            int rollOfDice = (int) (Math.random() * 6) + 1;
            String output = "You rolled a " + rollOfDice;
            JOptionPane.showMessageDialog(null, output, "Random Number Demo",
                JOptionPane.INFORMATION_MESSAGE);
        } else {
            System.out.println("Running in a headless environment. Cannot display GUI.");
            int rollOfDice = (int) (Math.random() * 6) + 1;
            System.out.println("You rolled a " + rollOfDice);
        }
        System.exit(0);
    }
}

public static void main(String[] args) {
    // Demonstrate usage of AudioPlayer
    AudioPlayer player = new AudioPlayer("Cool Music Player", "High Bass");
    System.out.println(player);

    player.play();
    player.stop();
    player.previous();
    player.next();

    // Demonstrate Random class
    Random.main(args);
}
}

```

Output:

C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.16299.125]

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C:\Users\student\Desktop\java>javac ProductionLineDemo.java

C:\Users\student\Desktop\java>java ProductionLineDemo

Manufacturer : OracleProduction

Serial Number : 1

Date : Mon Aug 26 14:41:11 IST 2024

Name : Cool Music Player

Audio Spec : High Bass

Type : AU

Playing

Stopped

Previous track

Next track

C:\Users\student\Desktop\java>