

1) Code

```
import java.awt.Color;

public class JavaBank {

    public static final Color COMPANY_COLOR = new Color(173, 216, 230);

    public static void main(String[] args) {

        RoadBike bike1 = new RoadBike();

        MountainBike bike2 = new MountainBike();

        bike1.setHandleBars("Drop");

        bike1.setTyreWidth("23mm");

        bike1.setPostHeight("22");

        bike1.setPostHeight("20");

        System.out.println("Bike1 Make: " + RoadBike.MAKE);

        System.out.println("Bike1 HandleBars: " + bike1.getHandleBars());

        System.out.println("Bike1 Tyre Width: " + bike1.getTyreWidth());

        System.out.println("Bike1 Post Height: " + bike1.getPostHeight());

    }

}

interface BikeParts {

    String MAKE = "Oracle Bikes";

    String getHandleBars();

    void setHandleBars(String newValue);

    String getTyres();

    void setTyres(String newValue);

    String getSeatType();

    void setSeatType(String newValue);

}
```

```

interface MountainParts {

    String TERRAIN = "off_road";

    String getSuspension();
    void setSuspension(String newValue);

    String getType();
    void setType(String newValue);
}

// Interface defining road bike parts
interface RoadParts {

    String TERRAIN = "track_racing"; // Constant declaration

    String getTyreWidth();
    void setTyreWidth(String newValue);

    String getPostHeight();
    void setPostHeight(String newValue);
}

// Base Bike class implementing BikeParts
class Bike implements BikeParts {

    private String handleBars;
    private String tyres;
    private String seatType;

    @Override
    public String getHandleBars() {
        return handleBars;
    }
}

```

```
@Override  
  
public void setHandleBars(String newValue) {  
    this.handleBars = newValue;  
}
```

```
@Override  
  
public String getTyres() {  
    return tyres;  
}
```

```
@Override  
  
public void setTyres(String newValue) {  
    this.tyres = newValue;  
}
```

```
@Override  
  
public String getSeatType() {  
    return seatType;  
}
```

```
@Override  
  
public void setSeatType(String newValue) {  
    this.seatType = newValue;  
}  
}  
  
// MountainBike class implementing MountainParts  
class MountainBike extends Bike implements MountainParts {  
    private String suspension;  
    private String type;
```

```
@Override  
public String getSuspension() {  
    return suspension;  
}
```

```
@Override  
public void setSuspension(String newValue) {  
    this.suspension = newValue;  
}
```

```
@Override  
public String getType() {  
    return type;  
}
```

```
@Override  
public void setType(String newValue) {  
    this.type = newValue;  
}  
}
```

```
// RoadBike class implementing RoadParts  
class RoadBike extends Bike implements RoadParts {  
    private String tyreWidth;  
    private String postHeight;
```

```
@Override  
public String getTyreWidth() {  
    return tyreWidth;  
}
```

@Override

```
public void setTyreWidth(String newValue) {  
    this.tyreWidth = newValue;  
}
```

@Override

```
public String getPostHeight() {  
    return postHeight;  
}
```

@Override

```
public void setPostHeight(String newValue) {  
    this.postHeight = newValue;  
}  
}
```