interface Image {

void display();

}

class RealImage implements Image {

private String fileName;

public RealImage(String fileName) {

this.fileName = fileName;

loadImageFromDisk();

}

private void loadImageFromDisk() {

System.out.println("Loading image: " + fileName);

}

@Override

public void display() {

System.out.println("Displaying image: " + fileName);

}

}

class ProxyImage implements Image {

private RealImage realImage;

private String fileName;

public ProxyImage(String fileName) {

this.fileName = fileName;

}

@Override

public void display() {

if (realImage == null) {

realImage = new RealImage(fileName);

}

realImage.display();

}

}

public class Main {

public static void main(String[] args) {

Image image = new ProxyImage("test.jpg");

image.display();

image.display();

}

}

OUTPUT:

