**Implementing the Proxy Pattern**

**ProxyPatternExample:**

interface Image {

    void display();

}

class RealImage implements Image {

    private String file;

    public RealImage(String file) {

        this.file = file;

        loadFromRemoteServer();

    }

    private void loadFromRemoteServer() {

        System.out.println("Loading " + file + " from the remote server");

    }

    @Override

    public void display() {

        System.out.println("Displaying " + file);

    }

}

class ProxyImage implements Image {

    private RealImage realImage;

    private String file;

    public ProxyImage(String file) {

        this.file = file;

    }

    @Override

    public void display() {

        if (realImage == null) {

            realImage = new RealImage(file);

        } else {

            System.out.println(file + " loaded from cache.");

        }

        realImage.display();

    }

}

public class ProxyPatternExample {

    public static void main(String[] args) {

        Image image1 = new ProxyImage("cat.png");

        Image image2 = new ProxyImage("dog.jpg");

        image1.display();

        System.out.println();

        image1.display();

        System.out.println();

        image2.display();

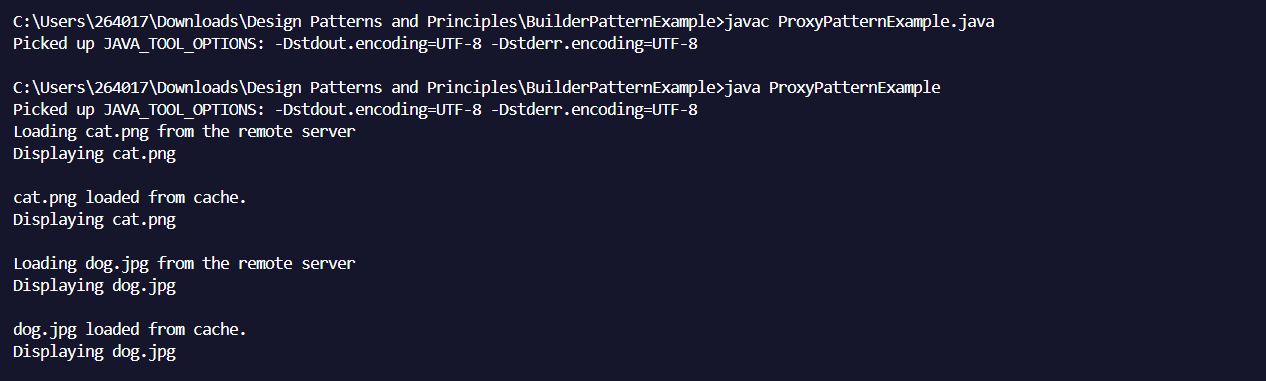
        System.out.println();

        image2.display();

    }

}

**Output:**

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