**Exercise 6:**

**Implementing the Proxy Pattern:**

Image.java:

**package** proxy;

**public** **interface** Image {

**void** display();

}

proxyImage.java:

**package** proxy;

**public** **class** proxyImage **implements** Image {

**private** RealImage realImage;

**private** String fileName;

**public** proxyImage(String fileName)

{

**this**.fileName=fileName;

}

**public** **void** display()

{

**if**(realImage==**null**)

{

realImage=**new** RealImage(fileName);

}

realImage.display();

}

}

RealImage.java:

**package** proxy;

**public** **class** RealImage **implements** Image{

**private** String fileName;

**public** RealImage(String fileName)

{

**this**.fileName=fileName;

loadFromRemoteServer(fileName);

}

**private** **void** loadFromRemoteServer(String fileName)

{

System.***out***.println("Loading "+fileName+ " from remote server...");

}

**public** **void** display()

{

System.***out***.println("Displaying "+fileName);

}

}

proxyTest.java:

**package** proxy;

**public** **class** proxyTest {

**public** **static** **void** main(String[] args)

{

Image image=**new** proxyImage("lovely\_photo.jpg");

image.display();

image.display();

}

}

**Output:**

