Sample Solution --- Exercise 4

This is a sample solution to the programming exercise. Your solution doesn't have to look exactly like this, but it should provide similar results.

```
import java.io.*;
import java.util.*;

public class ReadBinaryFileExercise
{
      public static void main( String [] args )
      {
            DataInputStream in = null;

            try
            {
                  in =  new DataInputStream(
                        new BufferedInputStream(
                        new FileInputStream( "products.dat" ) ));

                  while ( in.available() > 0 )
                  {
                        int productNum = 0; String
                        productName = ""; int
                        quantity = 0; double
                        cost = 0; productNum
                        = in.readInt();

                        // Must read String char by char

                        for( int j = 0; j < 15; j++ )
                              productName += in.readChar();

                        quantity = in.readInt();
                        cost = in.readDouble();

                        System.out.println( productNum + "\t\t" +
                                            productName + "\t\t" +
                                            quantity + "\t\t" + cost );
                  }

                  in.close();
            }
            catch( Exception e )
            {
                  System.out.println( "Error writing to file" );
            }
      }
}
```

Note that since there are no methods in the `DataInputStream` class that read String types directly, the product names are read character by character using the `readChar()` method and with the knowledge that the product name field has a fixed field width of 15 characters.