# Initial redesign

When you make a copy of a file to disk you want to **normalise** line breaks (replace '\r\n' with '\n').

To send over the internet you want to **encrypt** (+1 if letter or digit).

To send via Bluetooth you want to **encrypt** and remove **repeated spaces**.

# Modification 1

When making a copy of a file to disk, in addition to normalising ('\n' instead of '\r\n'), we may also want to encrypt it.

It should be possible to indicate in the main whether to encrypt or not when making the copy.

```java
// "a.txt" without encryption
system.copy("private.txt" ... "a.txt");
// "b.txt" encrypted
system.copy("private.txt" ... "b.txt");
```

# Modification 2

When sending over the Internet, in addition to encrypting, we want to be able to indicate whether to normalise line breaks or remove repeated spaces or both.

Main.java

```java
// Normalised
system.copy("private.txt" ... "1.1.1.1");
// Without repeated blanks
system.copy("private.txt" ... "1.1.1.2");
// Normalised and without repeated blanks
system.copy("private.txt" ... "1.1.1.3");
```

# Modification 3

In all cases—copying the file to disk, sending it over the Internet, or via Bluetooth—we want to know the number of characters copied.

Main.java

```java
system.copy("private.txt" ... "1.1.1.1");
System.out.println(numberOfCharacters +
    " characters copied");
```

# Modification 4

When normalising line breaks or removing repeated spaces, we also want to know the number of characters before processing.

Main.java

```java
// Normalised
system.copy("private.txt" ... "1.1.1.1");
System.out.println("Before normalisation there were "
        + ... + " characters");
System.out.println("After normalisation, " + ...
        + " characters were copied");
```

# Modification 5

Encrypting a large file is a slow operation. If the file needs to be sent over both the Internet and Bluetooth, we would like to encrypt it only once to save time.

Main.java

```java
// It is sent encrypted to both
system.copy("private.txt" ...
     "1.1.1.1" ... "César's iPhone");
```