Java Program to Convert Byte array to String in Java

Here is our sample program to show why relying on default character encoding is a bad idea and why you must use character encoding while converting byte array to String in Java. In this program, we are using Apache Commons IOUtils class to directly read files into a byte array.

It takes care of the opening/closing input stream, so you don't need to worry about leaking file descriptors. Now how you create String using that array, is the key. If you provide the right character encoding, you will get the correct output otherwise a nearly correct but incorrect output.

```java
import java.io.FileInputStream;
import java.io.IOException;
import org.apache.commons.io.IOUtils;

/**
 * Java Program to convert byte array to String.
 * In this example, we have first
 * read an XML file with character encoding "UTF-8" into byte array
 * and then created
 * String from that. When you don't specify a character encoding, Java uses
 * platform's default encoding, which may not be the same if file is
 * a XML document coming from another system, emails,
 * or plain text files fetched from an * HTTP server etc.
 * You must first discover correct character encoding
 * and then use them while converting byte array to String.
 *
 * @author Javin Paul
 */
public class ByteArrayToString{

        public static void main(String args[]) throws IOException  {

            System.out.println("Platform Encoding : "
                        + System.getProperty("file.encoding"));

            FileInputStream fis = new FileInputStream("info.xml");

            // Using Apache Commons IOUtils to read file into byte array
            byte[] filedata = IOUtils.toByteArray(fis);

            String str = new String(filedata, "UTF-8");
            System.out.println(str);

        }
```

```
  }
```

```
Output :
Platform Encoding : Cp1252
<?xml version="1.0" encoding="UTF-8"?>
<banks>
    <bank>
        <name>Industrial & Commercial Bank of China </name>
        <headquarters> Beijing , China</headquarters>
    </bank>
    <bank>
        <name>Crédit Agricole SA</name>
        <headquarters>Montrouge, France</headquarters>
    </bank>
    <bank>
        <name>Société Générale</name>
        <headquarters>Paris, Île-de-France, France</headquarters>
    </bank>
</banks>
```