MODULE 7p - Reading Data

CHARACTER INPUT

The following program reads characters from Standard Input and simply copies them to the Standard Output. Key it in and try it out.

```
import java.io.DataInputStream;
import java.io.EOFException;
import java.io.IOException;

public class InputIntro
 { private static final DataInputStream DIS = new DataInputStream(System.in);

   public static void main(String[] args)
    { try
       { while (true)
          { char ch = (char)DIS.readByte();
            System.out.print(ch);
  }
       }
      catch(EOFException e)
       { System.out.println("Data Exhausted");
       }
      catch(IOException e)
       { System.out.println("IOException Encountered");
       }
    }
 }
```

EXTRACTING NUMBERS FROM SURROUNDING JUNK

The following program reads characters from Standard Input and extracts sequencs of digits delimited by non-digits and converts them into int values which are then written out. Key it in and try it out.

```
import java.io.*;

public class ExtractNumbers
 { private static final DataInputStream DIS = new DataInputStream(System.in);

   public static void main(String[] args)
    { try
       { while (true)
    System.out.println(fmtInt(readNum(),9));
       }
      catch(EOFException e)
       { System.out.println("Data Exhausted");
       }
      catch(IOException e)
       { System.out.println("IOException Encountered");
       }
    }

   private static int readNum() throws EOFException, IOException
    { char ch;
      int n=0;
      do
       { ch = (char)DIS.readByte();
       } while (ch<'0' || '9'<ch);
      do
       { n = 10*n + ch - '0';
         ch = (char)DIS.readByte();
       } while ('0'<=ch && ch<='9');
      return n;
    }

   private static String fmtInt(int n, int d)
    { String s = String.valueOf(n);
      while (s.length() < d)
         s = " " + s;
      return s;
    }
 }
```