

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.printf("%c", ch);
            }
        }
        catch(EOFException e)
        { System.out.printf("Data Exhausted%n");
        }
        catch(IOException e)
        { System.out.printf("IOException Encountered%n");
        }
    }
}
```

EXTRACTING NUMBERS FROM SURROUNDING JUNK

The following program reads characters from Standard Input and extracts sequences 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.printf("%9d%n", readNum());
            }
        }
        catch(EOFException e)
        { System.out.printf("Data Exhausted%n");
        }
        catch(IOException e)
        { System.out.printf("IOException Encountered%n");
        }
    }
}
```

```

    }
}

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;
}
}

```