Coursework 1 – Model Answer

A partial solution:

```
TOKEN :
{
SKIP : /* WHITE SPACE */
{
    " "
  | "\t"            /* Tab */
  | "\n"            /* Newline */
  | "\r"            /* Return */
  | "\f"            /* Formfeed */
}
|
< INTEGER_LITERAL:
    <DECIMAL_LITERAL> ("L")?
  | <HEX_LITERAL> ("L")?
  | <OCTAL_LITERAL> ("L")?
  | <BINARY_LITERAL> ("L")?
>
|
< #DECIMAL_LITERAL: ("0" | <SIGN> (["1"-"9"] (["0"-"9"])*)) >
|
< #HEX_LITERAL:    <SIGN> ["z","Z"] (["0"-"9","a"-"f","A"-"F"])+ >
|
< #OCTAL_LITERAL: <SIGN> ["o","O"] (["0"-"7"])+ >
|
  #BINARY_LITERAL: <SIGN> ["b","B"] (["0"-"1"])+ >
|
< FLOATING_POINT_LITERAL:
    <DIGITS> "." (<DIGITS>)? (<EXPONENT>)? (<TYPESUFFIX>)?
  | "." <DIGITS> (<EXPONENT>)? (<TYPESUFFIX>)?
  | <DIGITS> <EXPONENT> (<TYPESUFFIX>)?
  | <DIGITS> (<EXPONENT>)? <TYPESUFFIX>
>
|
< #DIGITS: (["0"-"9"])+ >
|
< #TYPESUFFIX: (["f","d"]) >
|
< #EXPONENT: "e" (["+","-"])? (["0"-"9"])+ >
|
< #SIGN: ["+","-"]
|
< COMMENT:
    ("//") (~["\n", "\r"])* ("\n" | "\r" | "\r\n")  /*single line comment*/
     /* what's the problem with the one above */
  | ("/*") ( ~[] )* ("*/")   /*multi-line comment*/  >
|
< ERROR: (~[" ","\n","\t","\r","\f"])+    >
}
```