In the following grammar, words beginning with capital letters are variables. Words all in lower case are terminals (tokens).

\[
\begin{align*}
\text{Decl} & \rightarrow \text{Type} \ \text{Vlist} \\
\text{Type} & \rightarrow \text{Itype} \ | \ \text{Ftype} \ | \ \text{char} \\
\text{Itype} & \rightarrow \text{Modi1} \ \text{Modi2} \ \text{int} \\
\text{Modi1} & \rightarrow \text{unsigned} \ | \ \text{epsilon} \\
\text{Modi2} & \rightarrow \text{short} \ | \ \text{long} \ | \ \text{epsilon} \\
\text{Ftype} & \rightarrow \text{float} \ | \ \text{double} \\
\text{Vlist} & \rightarrow \text{id} \ \text{Mlist} \\
\text{Mlist} & \rightarrow \text{comma} \ \text{id} \ \text{Mlist} \ | \ \text{semi}
\end{align*}
\]

The words are intended to suggest the role played in a programming language. I.e.,

- **Decl** represents a declaration statement.
- **Type** represents a type specification.
- **IType** represents an integer type specification.
- **Modi1** represents a first modifier for an integer type.
- **Modi2** represents a second modifier for an integer type.
- **FType** represents an floating point type specification.
- **Vlist** represents an list of variables.
- **Mlist** provides recursion to allow a comma separated list.

**Your tasks:**

1. Give a derivation for the sentence `long int id, id ;`
2. Compute **FIRST(X)** for every variable X in the grammar. *Hint: Use the methods discussed in class.*
3. Compute **FOLLOW(X)** for every variable X in the grammar. *Hint: Use the methods discussed in class.*