Lab 05

Ques 1: Write the LEX and YACC source to recognize the following:

a) General Template:

The template for the C program is

#include<stdio.h>

int main( )

{

}

PGM 🡪 HEADER INT MAIN LB RB LCB RCB

|  |  |
| --- | --- |
|  |  |
|  |  |

b) Declaration statements:

Allow declaration statements inside the program body. Integer variables separated by

comma can be declared inside the program body. A program can have multiple

declaration statements. Variables are sequence of lower-case alphabets. Each

declaration statement is ended by a semicolon.

int a, b;

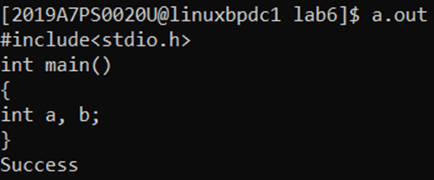
PGM 🡪 HEADER INT MAIN LB RB LCB BODY RCB

BODY 🡪 DECL\_STMTS

DECL\_STMTS 🡪 DECL\_STMT DECL\_STMTS | DECL\_STMT

DECL\_STMT 🡪 INT VAR\_LIST SC

VAR\_LIST 🡪 VAR COMA VAR\_LIST | VAR



c) OPERATORS &amp; PROGRAM STATEMENTS:

Allow declaration statements to be followed by program statements inside the

program body. Program statements are ended by a semicolon. Program statements

can be arithmetic expressions involving +-\*/ operators.

PGM 🡪 HEADER INT MAIN LB RB LCB BODY RCB

BODY 🡪 DECL\_STMTS PROG\_STMTS

DECL\_STMTS 🡪 DECL\_STMT DECL\_STMTS | DECL\_STMT

PROG\_STMTS 🡪 PROG\_STMT PROG\_STMTS | PROG\_STMT

DECL\_STMT 🡪 INT VAR\_LIST SC

VAR\_LIST 🡪 VAR COMA VAR\_LIST | VAR

PROG\_STMT 🡪 VAR EQ A\_EXPN SC

A\_EXPN 🡪 A\_EXPN OP A\_EXPN | LB A\_EXPN RB | VAR