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CD Practical 8

Aim : To implement YACC Program for C Variable Declaration

Code (p9.l) :

```
%{  
    #include "p9.tab.h"  
%}  
  
%%  
  
"int"          { return INT; }  
"float"        { return FLOAT; }  
"char"         { return CHAR; }  
[ \t\n]+       ; /* Ignore whitespace */  
[a-zA-Z_][a-zA-Z0-9_]* { return ID; }  
";"           { return SEMICOLON; }  
", "          { return COMMA; }  
  
%%  
  
int yywrap(void) {  
    return 1;  
}
```

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Code (p9.y) :

```
%{  
    #include <stdio.h>  
    int yylex(void);  
    void yyerror(const char *str) {  
        fprintf(stderr, "error: %s\n", str);  
    }  
}%  
  
%token INT FLOAT CHAR ID SEMICOLON COMMA  
  
%%  
  
declaration:  
    type_specifier variable_list SEMICOLON { printf("Valid  
declaration.\n"); }  
    ;  
  
type_specifier:  
    INT { printf("Type: int\n"); }  
    | FLOAT { printf("Type: float\n"); }  
    | CHAR { printf("Type: char\n"); }  
    ;
```

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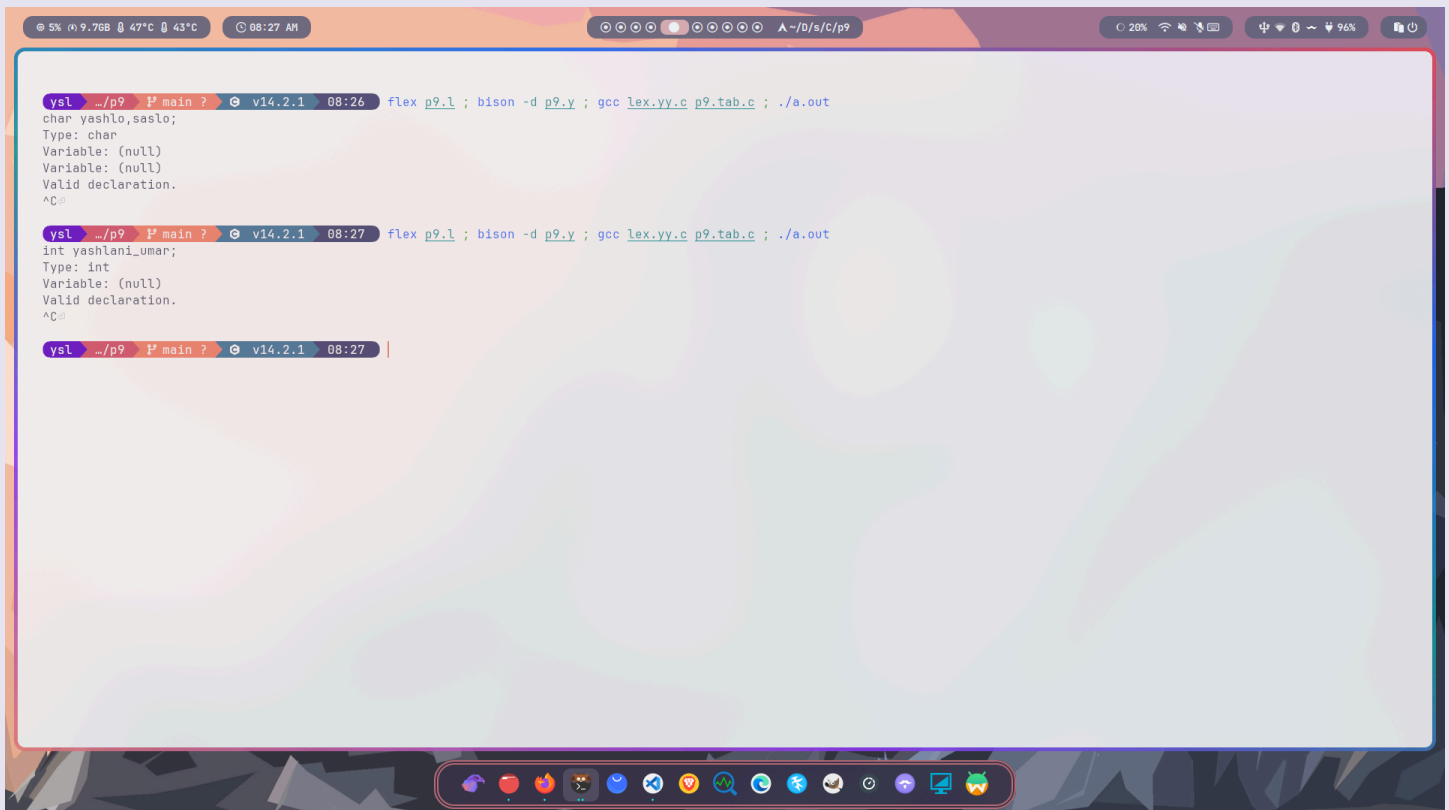
```
variable_list:

    variable_list COMMA ID { printf("Variable: %s\n", $3); }
    | ID { printf("Variable: %s\n", $1); }
    ;

%%

int main(void) {
    return yyparse();
}
```

Output :



```
ysl ~/p9 P main ? v14.2.1 08:26 flex p9.l ; bison -d p9.y ; gcc lex.yy.c p9.tab.c ; ./a.out
char yashlo,saslo;
Type: char
Variable: (null)
Variable: (null)
Valid declaration.
^C

ysl ~/p9 P main ? v14.2.1 08:27 flex p9.l ; bison -d p9.y ; gcc lex.yy.c p9.tab.c ; ./a.out
int yashlani_umar;
Type: int
Variable: (null)
Valid declaration.
^C

ysl ~/p9 P main ? v14.2.1 08:27 |
```