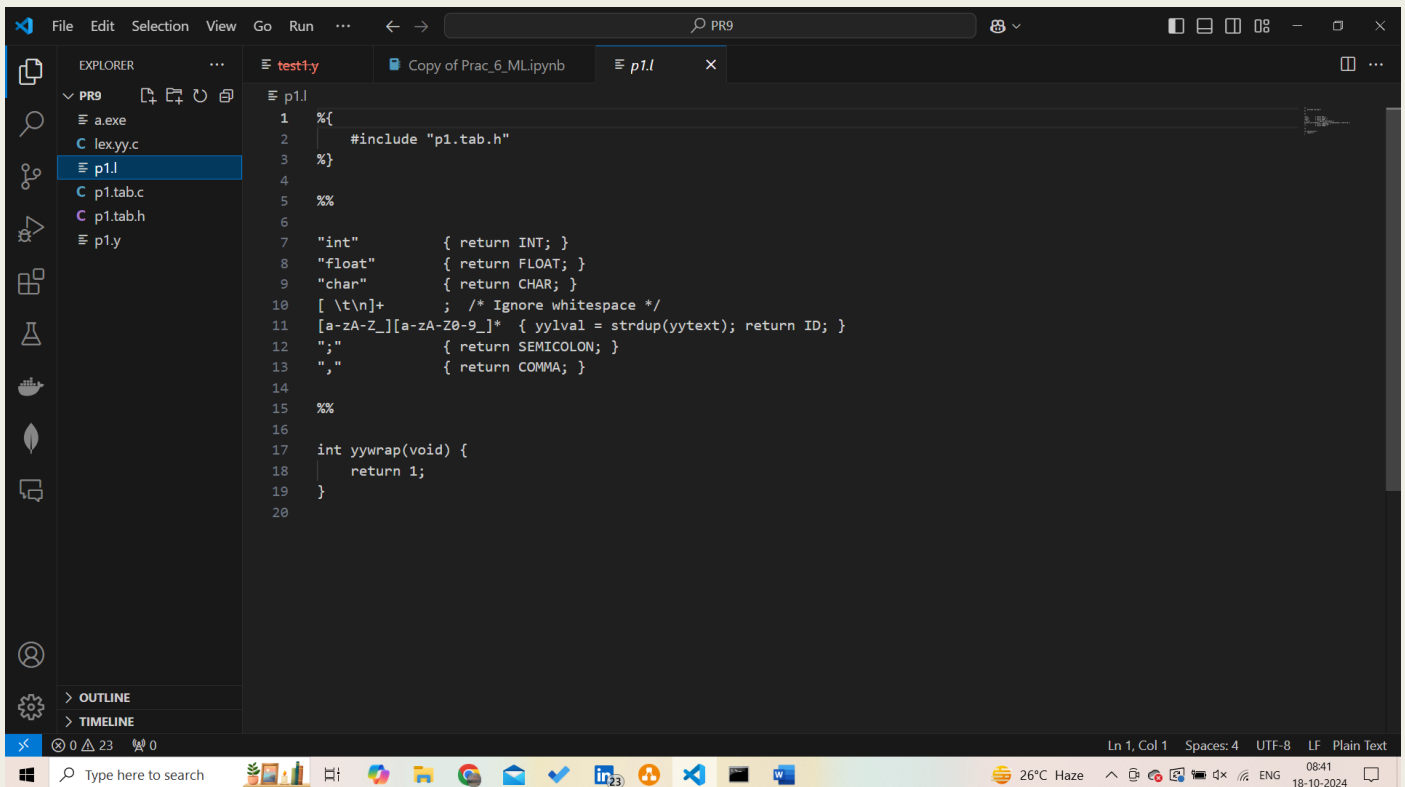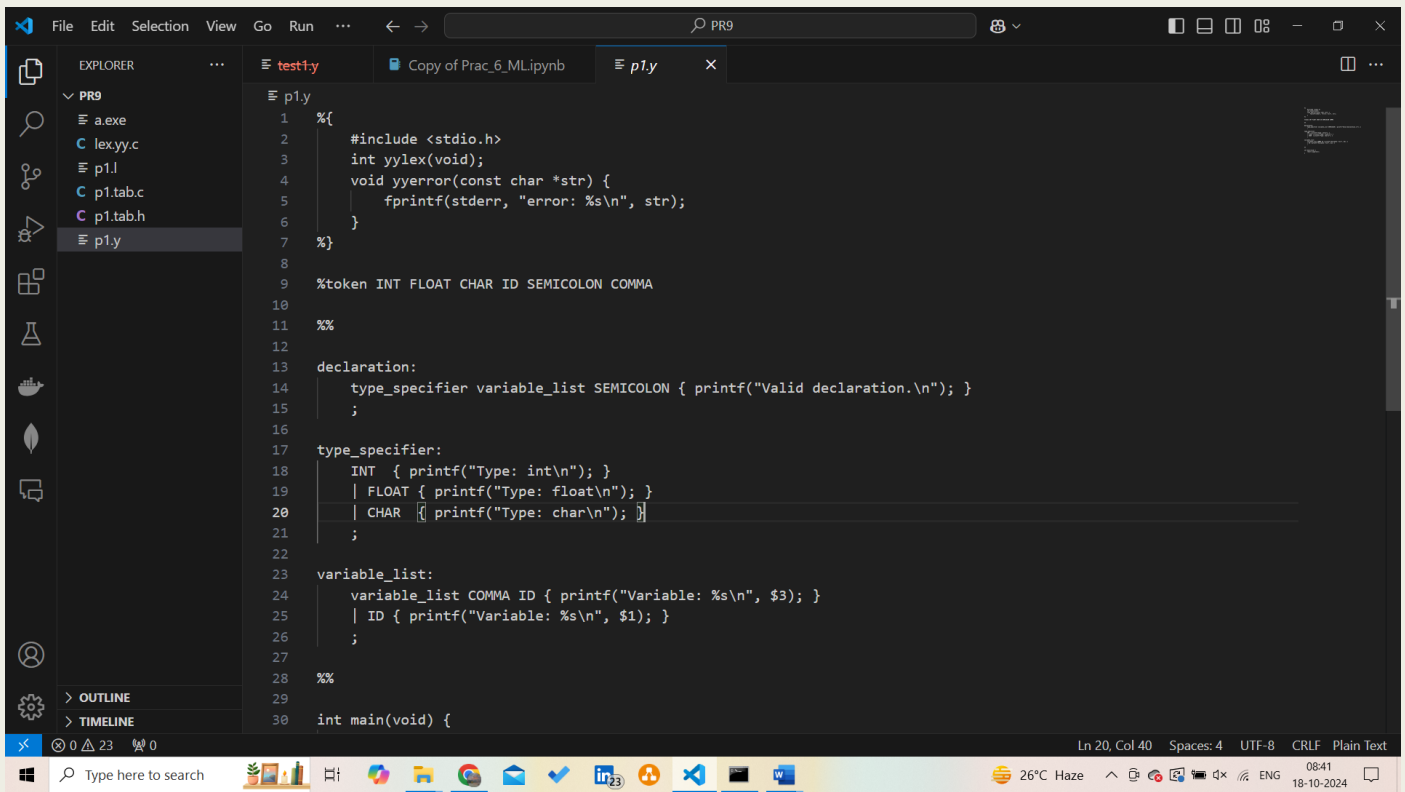# NAME: KSHITIJ GUPTA
Enrolment Number: 21162101007
Sub: CD

Practical – 9[Batch-71]

Code:
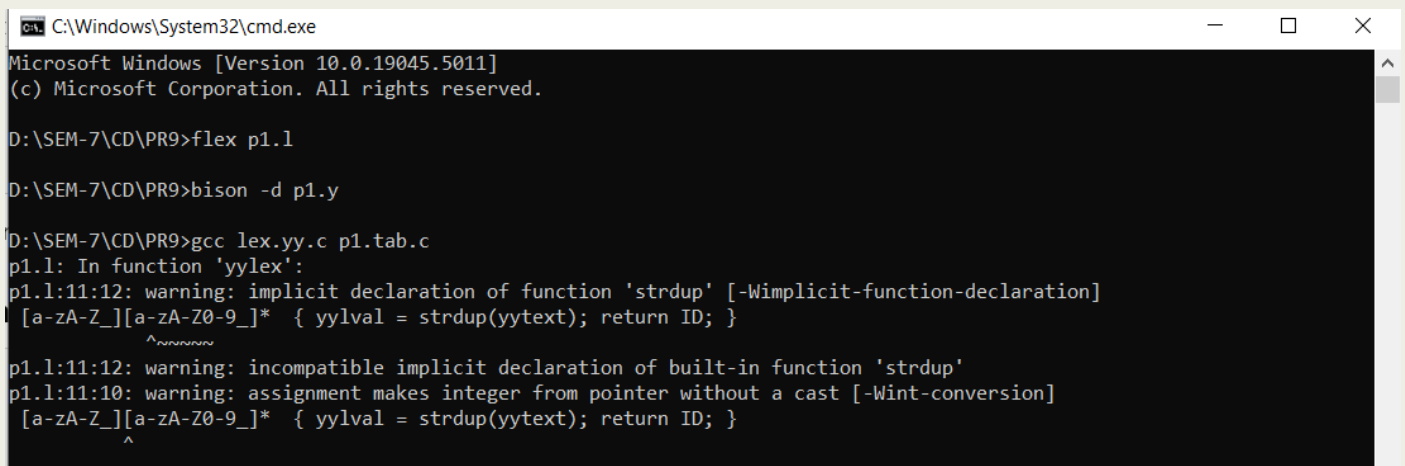
```
1  %{
2      #include "p1.tab.h"
3  %}
4
5  %%
6
7  "int"        { return INT; }
8  "float"      { return FLOAT; }
9  "char"       { return CHAR; }
10 [ \t\n]+     ;  /* Ignore whitespace */
11 [a-zA-Z_][a-zA-Z0-9_]*  { yylval = strdup(yytext); return ID; }
12 ";"          { return SEMICOLON; }
13 ","          { return COMMA; }
14
15 %%
16
17 int yywrap(void) {
18     return 1;
19 }
20
```

```
1    %{
2        #include <stdio.h>
3        int yylex(void);
4        void yyerror(const char *str) {
5            fprintf(stderr, "error: %s\n", str);
6        }
7    %}
8
9    %token INT FLOAT CHAR ID SEMICOLON COMMA
10
11   %%
12
13   declaration:
14       type_specifier variable_list SEMICOLON { printf("Valid declaration.\n"); }
15       ;
16
17   type_specifier:
18       INT  { printf("Type: int\n"); }
19       | FLOAT { printf("Type: float\n"); }
20       | CHAR  { printf("Type: char\n"); }
21       ;
22
23   variable_list:
24       variable_list COMMA ID { printf("Variable: %s\n", $3); }
25       | ID { printf("Variable: %s\n", $1); }
26       ;
27
28   %%
29
30   int main(void) {
```

Output:


```
Microsoft Windows [Version 10.0.19045.5011]
(c) Microsoft Corporation. All rights reserved.

D:\SEM-7\CD\PR9>flex p1.l

D:\SEM-7\CD\PR9>bison -d p1.y

D:\SEM-7\CD\PR9>gcc lex.yy.c p1.tab.c
p1.l: In function 'yylex':
p1.l:11:12: warning: implicit declaration of function 'strdup' [-Wimplicit-function-declaration]
 [a-zA-Z_][a-zA-Z0-9_]*  { yylval = strdup(yytext); return ID; }
            ^~~~~~
p1.l:11:12: warning: incompatible implicit declaration of built-in function 'strdup'
p1.l:11:10: warning: assignment makes integer from pointer without a cast [-Wint-conversion]
 [a-zA-Z_][a-zA-Z0-9_]*  { yylval = strdup(yytext); return ID; }
          ^
```

```
D:\SEM-7\CD\PR9>float a, b, c;
'float' is not recognized as an internal or external command,
operable program or batch file.

D:\SEM-7\CD\PR9>
D:\SEM-7\CD\PR9>a
float a, b, c;
Type: float
Variable: a
Variable: b
Variable: c
Valid declaration.
int var1, var_2;
error: syntax error

D:\SEM-7\CD\PR9>_
```