

6. a) Program to recognize a valid arithmetic expression that uses operates +,-,\*,/

### **6a.i**

```
%{
#include "y.tab.h"
%}
%%
[0-9]+(\.[0-9]+)? {return NUM;}
[a-zA-Z][_a-zA-Z0-9]* {return ID;}
[\t] ;
\n {return 0;}
. {return yytext[0];}
%%
int yywrap() { }
```

### **6a.y**

```
%{
#include <stdio.h>
#include<stdlib.h>
%}
%token NUM ID
%left '+' '-'
%left '/' '*'

%%
expr:e {printf("Valid expression\n"); return 0;}
e:e+'e'
| e-'e'
| e'*e
| e/'e'
```

```
| '('e'
| NUM
| ID   ;
%%

int yywrap() { }

int main()
{
    printf("\nType the expression\n");
    yyparse();
    return 0;
}

int yyerror()
{
    printf("\nInvalid expression\n");
    return 0;
}
```