**ASSIGNMENT NO.**

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CLASS: BE COMP-1 ROLL NO.: 402006

PROGRAM:

//-----------------------------------Lex file----------------------------------//

%{

#include "y.tab.h"

#include<stdio.h>

%}

%%

[0-9]+|[0-9]+\.[0-9]+ {yylval.dval=atof(yytext); return num;}

[a-zA-Z] {yylval.dname=yytext[0]; return name;}

[\t];

\n return 0;

. return yytext[0];

%%

int yywrap()

{

return 1;

}

//-----------------------------------Yacc file---------------------------------------//

%{

#include<math.h>

#include<stdio.h>

#include<string.h>

extern int yylex();

extern int yyerror(char \*e);

void displayquad();

char addquad(char,char,char,char);

int flag=0;

char temp='A';

int i=0;

struct quad

{

char op;

char arg1;

char arg2;

char res;

}q[10];

%}

%union

{

double dval;

char dname;

}

%token<dval> num

%type<dval> exp

%token<dname> name

%left '+' '-'

%left '\*' '/'

%%

s:name'='exp{addquad('=',(char)$3,'\_',(char)$1);}

exp: exp '+' exp {$$ = addquad('+',(char)$1,(char)$3,temp);}

|exp '-' exp {$$ = addquad('-',(char)$1,(char)$3,temp);}

|exp '\*' exp {$$ = addquad('\*',(char)$1,(char)$3,temp);}

|exp '/' exp {$$ = addquad('/',(char)$1,(char)$3,temp);}

|num {$$ = (char)$1;}

|name {$$ = (char)$1;}

|'('exp')' {$$ = (char)$2;}

;

%%

char addquad(char a, char b, char c, char d)

{

q[i].op=a;

q[i].arg1=b;

q[i].arg2=c;

q[i].res=d;

i++;

return temp++;

}

void displayquad()

{

int j=0;

printf("\top");

printf("\targ1");

printf("\targ2");

printf("\tresult");

printf("\n");

while(j<i)

{

printf("\t%c",q[j].op);

printf("\t%c",q[j].arg1);

printf("\t%c",q[j].arg2);

printf("\t%c",q[j].res);

printf("\n");

j++;

}

}

int main()

{

yyparse();

displayquad();

return 0;

}

extern int yyerror(char \*e)

{

printf("String Rejected..\n");

}