**Quadruple**

#include<stdio.h>

#include<string.h>

int main()

{

char line[20];

int s[20],t=1,m=0,i=0;

printf("Enter string:");

gets(line);

for(i=0;i<20;i++)s[i]=0;

printf("mem\top\ta1\ta2\tres\n");

for(i=1;i<2;i++)

{

printf("\n(%d)\t%c \t%c \t%c \tt%d\n",m,line[i+2],line[i+1],line[i+3],i);

printf("\n(%d)\t%c \tt%d \t%c \tt%d\n",m+1,line[i+4],i,line[i+5],i+1);

printf("\n(%d)\t%c \t%c \tt%d\n",m+2,line[i],line[i-1],i+1);

}

}

Trple :

#include<stdio.h>

#include<string.h>

int main()

{

char line[20];

int s[20],t=1,m=0,i=0;

printf("Enter string:");

gets(line);

for(i=0;i<20;i++)s[i]=0;

printf("mem\top\ta1\ta2\n");

for(i=1;i<2;i++)

{

printf("\n(%d)\t%c \t%c \t%c\n",m,line[i+2],line[i+1],line[i+3]);

printf("\n(%d)\t%c \t(%d) \t%c\n",m+1,line[i+4],m,line[i+5]);

printf("\n(%d)\t%c \t%c \t(%d)\n",m+2,line[i],line[i-1],m+1);

}

}

**Backend of compiler**

#include<stdio.h>

#include<conio.h>

#include<string.h>

int main()

{

int n,i,j;

char a[50][50];

printf("enter the no.of intermediate code:");

scanf("%d",&n);

for(i=0;i<n;i++)

{

printf("enter the 3 address code:%d:",i+1);

for(j=0;j<6;j++)

{

scanf("%c",&a[i][j]);

}

}

printf("the generated code is:");

for(i=0;i<n;i++)

{

printf("\n mov %c,R%d",a[i][3],i);

if(a[i][4]=='-')

{

printf("\n sub %c,R%d",a[i][5],i);

}

if(a[i][4]=='+')

{

printf("\n add %c,R%d",a[i][5],i);

}

if(a[i][4]=='\*')

{

printf("\n mul %c,R%d",a[i][5],i);

}

if(a[i][4]=='/')

{

printf("\n div %c,R%d",a[i][5],i);

}

printf("\n mov R%d,%c",i,a[i][1]);

printf("\n");

}

return 0;

}

**recursive desent parsing**

#include<stdio.h>

#include <stdlib.h>

char l;

void match(char c)

{

if(l==c)

l=getchar();

else

{

printf("Invalid Input\n");

exit(0);

}

}

void B()

{

if(l=='b')

{

match('b');

}

else

{

printf("Invalid Input\n");

exit(0);

}

}

void A()

{

if(l=='a')

{

match('a');

B();

}

else

return;

}

void S()

{

A();

A();

}

int main()

{

char input[10];

printf("Enter String with $ at the end\n");

l=getchar();

S();

if(l=='$')

{

printf("\nParsing Successful\n");

}

else

{

printf("Invalid Input\n");

}

}

output:

Enter String with $ at the end

abab$

Parsing Successful

Mathematical operations.l

%{

#include<stdio.h>

float op1=6,op2=7;

%}

%%

"+" {printf("sum =%lf",op1+op2);}

"-" {printf("diff=%lf",op1-op2);}

"\*" {printf("mul=%lf",op1\*op2);}

"/" {printf("div=%lf",op1/op2);}

. {printf("enter proper operator.");}

%%

int yywrap(){}

int main()

{

printf("Enter the Operator::");

yylex();

}