**CODE GENERATION**

**AIM:** To implement the back end of a compiler that takes the three address code as input and produces assembly language code as output.

**PROGRAM:**

#include<stdio.h>

#include<conio.h>

#include<string.h>

void main()

{

int n,i,j;

char a[50][50];

clrscr();

printf("enter the no: 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");

}

getch();

}