Aim:-

write a c programme to insert, delete and display the the enteries of in symbol Table

Description

1. Insert

Input: int a = b+c

Output:

int is a keyword
= is assignment operator
+ is arithmetic operator

enteries in symbol table are

a

b

c

2. delete: enter a variable, check in symbol table, if present then delete otherwise print " not present in symbol table"

3. search: enter a variable, check in symbol table and print accordingly.

```c
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#define SIZE 20
char symbolpate [SIZE];
int noofEL =0;
char lib [32] [10] = { "auto", "double", "int", "struct", "break",
    "else", "long", "switch", "case", "enum", "register",
    "typedef", "char", "extern", "return", "union", "const"
    "float", "short", "unsigned", "continue", "for", "signed",
    "void", "default", "goto", "sizeof", "voltile", "do", "if",
    "static", "while" };
int iskeyword (char str[])
  { int j;
    for (j=0; j<32; j++)
    { if (strcmp (str, lib[j]) ==0)
    { return 1; }
    }
    return 0;
int isoperator (char str)
{ char operator [24] [10] = { "+", "-", "x", "/", "++", "--", ";", ":",
    "!=", ">", "<", ">=", "<=", "&&", "||", "!", "|", "^", "&",
    ".", "<<", ">>", "=", "?" };
    int i;
    for (i=0; i<24; i++)
    { if (str == operator [i] [10])
      { return 1; }
    }
    return 0;
}
```

```c
void filecheck (char name[])
{ file *fp;
    fp = fopen (name, "r");
    if (fp==null)
    { printf("couldn't open file"); }
else
    { char str[100];
    while (fscanf (fp, "%s", str)>0)
    {
        if (iskeyword (str))
        {
            printf ("%s is a keyword \n", str); }
        if (isoperator (str[0]))
        { printf("%s is a toperator \n", str); }
        else
        { if (noofel < size && (str[0]>='a' && str[0]<='z'))
            { symboldate [noofel] = str[0];
                noofel;
            }
        }
    }
    }
}

void Insertion ()
{
    char name[30];
    printf ("enter your file name");
```

```
        scanf(" %.s", name);
        filecheck(name);
    }
    void display()
    {
     if (noofEL <0)
      { printf(" \n No element is present now. \n"); }
     else
      { int i;
        printf(" \n Table symbols are \n");
        for (i=1; i< noofEL; i++)
        { printf(" %.c", symbolData [i]);
          printf("\n");
        }
      }
    }
    int search (char ch)
     { int i;
       for (i=0; i< noofEL; i++)
       { if (ch == symbolData [i])
         { return i;
         }
       }
         return -1;
     }
```

```c
void Deletion()
{ char ch;
    printf("enter elements to delete \n");
    scanf(" %c", &ch);
    if (noofEL <0)
    { printf("cant Delete, array is empty."); }
    int pos= search(ch);
    if (pos == -1)
    {
        printf("elements is not present in symbol table\n");
    }
    else
    { int i;
        for (i=pos; i< noofEL; i++)
        {
            symbolData[i]= symbolData[i+1];
        }
        noofEL --;
    }
}

int main()
{
    printf("By Pradeep Bahetu\n");
    int choice;
    printf("enter your choice for symbol Table\n");
    while (1)
    {
```

```c
printf("1. Insertion\n 2. Deletion\n 3. Disp\by\n Enter your choice");
scanf("%d", &choice);
switch (choice);
switch to
{
    case 1:
        Insertion();
        display();
        printf("Insertion Done\n");
        break;
    case 2:
        Deletion();
        printf("Deletion is Done");
        display();
        break;
    case 3:
        display();
        break;
    default:
        printf("Invalid choice");
        exit(0);
    }
    }
    return 0;
}
```

I/P   int a b+c

     int a=b+c

O/P

By Prateek Bahai

Enter your choice for Symbol Table

1.Insertion

2. Deletion

3. Display

Enter your choice:1

enter you File Name: operator.txt

  int is a keyword

  = is a operator

  + is a operator

Table symbols are

  a

  b

  c

Insertion Done

1. Insertion

2. Deletion

3. Display

Enter your choice:2

Enter y element to delete

  a

Deletion is Done

Table symbols are

  b

  c

1. Insertion
2. Deletion
3. Display
Enter your choice: 3

Table Symbols are
b
c