**PROGRAM**

#include<stdio.h>

#include<conio.h>

#define MAX 10

void create();

void insert();

void deletion();

void search();

void display();

int a,b[20], n, p, e, f, i, pos;

void main()

{

clrscr();

int ch;

char g='y';

do

{

printf("\n main Menu");

printf("\n 1.Create \n 2.Delete \n 3.Search \n 4.Insert \n 5.Display\n 6.Exit\n");

printf("\n Enter your Choice");

scanf("%d", &ch);

switch(ch)

{

case 1:create();

break;

case 2:deletion();

break;

case 3:search();

break;

case 4:insert();

break;

case 5:display();

break;

case 6:exit();

break;

default: printf("\n Enter the correct choice:");

}

printf("\n Do u want to continue:::");

scanf("\n%c", &g);

}

while(g=='y'||g=='Y');

getch();

}

void create()

{

printf("\n Enter the number of nodes");

scanf("%d", &n);

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

{

printf("\n Enter the Element:",i+1);

scanf("%d", &b[i]);

}

}

void deletion()

{

printf("\n Enter the position u want to delete::");

scanf("%d", &pos);

if(pos>=n)

{

printf("\n Invalid Location::");

}

else

{

for(i=pos+1;i<n;i++)

{

b[i-1]=b[i];

}

n--;

}

printf("\n The Elements after deletion");

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

{

printf("\t%d", b[i]);

}

}

void search()

{

printf("\n Enter the Element to be searched:");

scanf("%d", &e);

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

{

if(b[i]==e)

{

printf("Value is in the %d Position", i);

}

}

}

void insert()

{

printf("\n Enter the position u need to insert::");

scanf("%d", &pos);

if(pos>=n)

{

printf("\n invalid Location::");

}

else

{

for(i=MAX-1;i>=pos-1;i--)

{

b[i+1]=b[i];

}

printf("\n Enter the element to insert::\n");

scanf("%d",&p);

b[pos]=p;n++;

}

printf("\n The list after insertion::\n");

display();

}

void display()

{

printf("\n The Elements of The list ADT are:");

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

{

printf("\n\n%d", b[i]);

}

}