***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()

{

int ch;

char g='y';

do

{

printf("\n Main menu");

printf("\n1.Create\n2.Delete\n3.Search\n4.Insert\n5.Display\n6.Exit\n");

printf("\nEnter 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(0);

break;

default :

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

}

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

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

}

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

}

void create()

{

printf("\n Enter the no. 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 you 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 elements to be searched :");

scanf("%d",&e);

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

{

if(b[i]==e)

{

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

}

else

{

printf("value %d is not in the list :");

continue;

}

}

}

void insert()

{

printf("\n Enter the postion you 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 be insert:");

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]);

}

}

***OUTPUT:***

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