EXPERIMENT 1.

/\* Design, develop and implement a menu driven program in c for the following array operations.

a) inserting an element (ELEM) at a given valid position (POS)

b) deleting an element at a given valid position.

c) display of array elements

d) exit.

Support the program with functions for each of the above operations. \*/

#include<stdio.h>

#include<stdlib.h>

int a[10];

int n, ELEM, POS, i;

void display();

void insert();

void del();

int main()

{

int choice=1;

printf("Enter the size of array\n");

scanf("%d",&n);

printf("Enter the elements of array\n");

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

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

while(choice)

{

printf("\n\n........MENU.........\n\n");

printf(" 1. Display\n 2. Insert\n 3. delete\n 4.Exit\n");

printf("Enter your choice: ");

scanf("%d",&choice);

switch(choice)

{

case 1: display();

break;

case 2: insert();

break;

case 3: del();

break;

case 4: exit(0);

default: printf("Invalid Choice\n");

}

}

return 0;

}

void display()

{

printf("The array elements are \n");

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

{

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

}

}

void insert()

{

printf("Enter the position for new element : \n");

scanf("%d",&POS);

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

scanf("%d",&ELEM);

for(i=n-1;i>=POS;i--)

a[i+1]=a[i];

a[POS]=ELEM;

n=n+1;

}

void del()

{

printf("Enter position of element to be deleted:\n");

scanf("%d",&POS);

ELEM=a[POS];

for(i=POS;i<n-1;i++)

a[i]=a[i+1];

n=n-1;

printf("Deleted element is %d\n",ELEM);

}

/\* OUPUT:

Enter the size of array

3

Enter the elements of array

10

20

30

........MENU.........

1. Display

2. Insert

3. delete

4.Exit

Enter your choice: 1

The array elements are

10 20 30

........MENU.........

1. Display

2. Insert

3. delete

4.Exit

Enter your choice: 2

Enter the position for new element :

1

Enter the element to be inserted:

2222

........MENU.........

1. Display

2. Insert

3. delete

4.Exit

Enter your choice: 1

The array elements are

10 2222 20 30

........MENU.........

1. Display

2. Insert

3. delete

4.Exit

Enter your choice: 3

Enter position of element to be deleted:

1

Deleted element is 2222

........MENU.........

1. Display

2. Insert

3. delete

4.Exit

Enter your choice: 1

The array elements are

10 20 30

........MENU.........

1. Display

2. Insert

3. delete

4.Exit

Enter your choice: 4 \*/