PROGRAM 11:

```c
include<stdio.h>

int stack[100],choice,n,top,x,i;

void push(void);

void pop(void);

void display(void);

int main()

{

 top=-1;

 printf("\n Enter the size of STACK[MAX=100]:");

 scanf("%d",&n);

 printf("\n\t STACK OPERATIONS USING ARRAY");

 printf("\n\t------------------------------");

 printf("\n\t 1.PUSH\n\t 2.POP\n\t 3.DISPLAY\n\t 4.EXIT");

 do

 {

 printf("\n Enter the Choice:");

 scanf("%d",&choice);

 switch(choice)

 {

 case 1:

 {

 push();

 break;

 }

 case 2:

 {

 pop();

 break;

 }
```

```c
case 3:
{
display();
break;
}
case 4:
{
printf("\n\t EXIT POINT ");
break;
}
default:
{
printf ("\n\t Please Enter a Valid Choice(1/2/3/4)");
}


}
}
while(choice!=4);
return 0;
}
void push()
{
if(top>=n-1)
{
printf("\n\tSTACK is over flow");


}
else
{
printf(" Enter a value to be pushed:");
scanf("%d",&x);
```

```c
top++;
stack[top]=x;
}
}
void pop()
{
if(top<=-1)
{
printf("\n\t Stack is under flow");
}
else
{
printf("\n\t The popped elements is %d",stack[top]);
top--;
}
}
void display()
{
if(top>=0)
{
printf("\n The elements in STACK \n");
for(i=top; i>=0; i--)
printf("\n%d",stack[i]);
printf("\n Press Next Choice");
}
else
{
        printf("\n The STACK is empty");
}

}
```

OUTPUT:


```
Enter the size of STACK[MAX=100]:4

        STACK OPERATIONS USING ARRAY
        ----------------------------
        1.PUSH
        2.POP
        3.DISPLAY
        4.EXIT
Enter the Choice:1
Enter a value to be pushed:54

Enter the Choice:1
Enter a value to be pushed:55

Enter the Choice:1
Enter a value to be pushed:34

Enter the Choice:2

        The popped elements is 34
Enter the Choice:3

The elements in STACK

55
54
Press Next Choice
Enter the Choice:
```