

```
/*stack using array*/
#include<stdio.h>
#include<stdlib.h>
#define MAX 10
int top=-1,stack[MAX];    //stack's starting index=0
void push();
void pop();
void display();
int main()
{
int ch;
while(1)
{
printf("press 1 for push\n");
printf("press 2 for pop\n");
printf("press 3 for display\n");
printf("press 4 for exit\n");
printf("enter your choice\n");
scanf("%d",&ch);
switch(ch)
{
case 1:push();
break;
case 2:pop();
break;
case 3:display();
break;
case 4:exit(0);
default:
printf("invalid choice\n");
}
}
```

```

}
}
void push()
{
int item;
if(top>=MAX)
{
printf("stack is full\n");
}
else
{
printf("enter the value\n");
scanf("%d",&item);
top++;
stack[top]=item;
}
}
void pop()
{
int x;      //here,item=x
if(top<=-1)
{
printf("stack is empty\n");
}
else
{
x=stack[top];
printf("deleted value is %d\n",x);
top--;
}
}

```

```
void display()
{
if(top<=-1)
{
printf("stack is empty\n");
}
else
{
printf("the stack is below\n");
for(int i=top;i>=0;i--)
{
printf("%d\n",stack[i]);
}
}
}
```

```
C:\Users\HP\OneDrive\Desktop\collage work 3rd sem\stack using array.exe
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
1
enter the value
10
press 1 for push
press 2 for pop
press 3 for display
press 3 for display
press 4 for exit
enter your choice
1
enter the value
20
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
1
enter the value
30
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
1
enter the value
40
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
3
the stack is below
40
30
20
10
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
2
deleted value is 40
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
3
the stack is below
30
20
10
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
```