

**/\*stack using array\*/**

```
#include<stdio.h>

#include<stdlib.h>

#define MAX 10

int top=0,stack[MAX];    //stack is strating index=1

void push();

void pop();

void display();

int main()

{

int ch;

while(1)

{

printf("***main menu**\n");

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;
}
printf("the value is inserted\n");
}
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>=1;i--)  
{  
printf("%d\n",stack[i]);  
}  
}  
}
```

```
C:\Users\HP\OneDrive\Desktop\collage work 3rd sem\stack using array 1.exe
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
1
enter the value
10
the value is inserted
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
1
enter the value
20
the value is inserted
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
1
enter the value
30
the value is inserted
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
2
the stack is below
40
20
10
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
2
deleted value is 40
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
3
the stack is below
20
20
10
**main menu**
press 1 for push
press 2 for pop
press 3 for display
press 4 for exit
enter your choice
4
Process exited after 15.97 seconds with return value 0
Press any key to continue . . .
```