

Stack Program

```
#include<stdio.h>

#include<stdlib.h>

#define max 20

int opt,a[20],i,top=0,n;

int main()
{
    void create(),push(),pop(),disp();

    int wish;

    do
    {
        printf("\nMENU");

        printf("\n1.Create\n2.Push\n3.Pop\n4.Display\n5.Exit\n");

        printf("\nEnter ur option:");

        scanf("%d",&opt);

        switch(opt)
        {
            case 1:create();break;

            case 2:push();break;

            case 3:pop();break;

            case 4:disp();break;

            case 5:exit(0);
```

```
        }

        printf("\nDo u want to continue(1/0):");

        scanf("%d",&wish);

        }while(wish==1);

    return 0;

}
```

```
void create()
```

```
{

    printf("\nEnter the limit of the stack:\n");

    scanf("%d",&n);

    if(n<max)

        {

            printf("\nEnter the items:\n");

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

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

            top=n-1;

        }

    else

        printf("Unable to create the stack!");

}
```

```
void push()
```

```
{

    int x;

    if(top<max)

        {
```

```

        printf("\nEnter the element to be pushed:\n");

        scanf("%d",&x);

        top=top+1;

        a[top]=x;

        n=top;

    }

    else

        printf("\nStack is full!");

}

void pop()

{

    if(top<0)

        printf("Stack is empty!");

    else

    {

        printf("\nThe element popped is %d",a[top]);

        top=top-1;

        n=top;

    }

}

void disp()

{

    if(top<0)

        printf("The stack is empty!");

    else

```

```

    {

        printf("The elements in the stack are:");

        for(i=top;i>=0;i--)

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

    }

}

```

Output:

```

MENU
1.Create
2.Push
3.Pop
4.Display
5.Exit

Enter ur option:1

Enter the limit of the stack:
2

Enter the items:
11
22

Do u want to continue(1/0):1

MENU
1.Create
2.Push
3.Pop
4.Display
5.Exit

Enter ur option:4
The elements in the stack are:
 22
 11
Do u want to continue(1/0):1

MENU
1.Create
2.Push
3.Pop
4.Display
5.Exit

Enter ur option:3
The element popped is 22
Do u want to continue(1/0):1

MENU
1.Create
2.Push
3.Pop
4.Display
5.Exit

Enter ur option:2
Enter the element to be pushed:
11

Do u want to continue(1/0):1

MENU
1.Create

```