

DS Lab-2

Date: / /

Stack Implementation.

```
#include <stdio.h>
#include <process.h>
#include <stdlib.h>

int top = -1, stack[100];
void push();
void pop();
void display();

void main()
{
    int ch;
    while (1)
    {
        printf("\n*** Stack Menu ***");
        printf("\n\n1. Push\n2. Pop\n3. Display\n4. Exit");
        printf("\n\nEnter your choice (1-4):");
        scanf("%d", &ch);

        switch (ch)
        {
            case 1: push();
                    break;
```

Case 2 : pop();
break;

Case 3 : display();
break();

Case 4 : exit(0);

default : printf("Wrong choice");
}

}

void push()

{

int val;

if (top == MAX - 1)

{
printf("Stack is full");
}

else

{

printf("Enter element to push: ");

scanf("%d", &val);

top = top + 1;

stack[top] = val;

}

}

}


```
void pop ()
```

```
{
```

```
    if (top == -1)
```

```
    {
```

```
        printf ("In Stack is empty");
```

```
    }
```

```
    else
```

```
    {
```

```
        printf ("In Deleted element is: %.d",  
                stack[top]);
```

```
        top = top - 1;
```

```
    }
```

```
}
```

```
void display ()
```

```
{
```

```
    int i;
```

```
    if (top == -1)
```

```
    {
```

```
        printf ("In Stack is empty");
```

```
    }
```

```
    else
```

```
    {
```

```
        printf ("In Stack is: \n");
```

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

```
            printf ("%.d \n", stack[i]);
```

```
    }
```

```
}
```