

13 November 2020

DS - LAB TEST-1

Dhruv Dubey  
IBM19CS048

```
struct stack {  
    int arr[MAX];  
    int top;  
};
```

// initializing stack

```
void init (struct stack *s) {
```

```
    s->top = -1;
```

```
}
```

// pushing data in stack

```
void push (struct stack *s, int d) {
```

```
    if (s->top == MAX - 1) {
```

```
        printf ("Stack Overflow\n");
```

```
        return;
```

```
    }
```

```
    s->top ++;
```

```
    s->arr[s->top] = d;
```

```
}
```

//popping elements from stack

```
void pop ( struct stack *s) {
```

```
    if (s->top == -1) {
```

```
        printf("Stack Underflow\n");
```

```
        return;
```

```
    }  
    printf("%d was popped\n", s->arr[s->top]);  
    s->top--;
```

```
}
```

// ~~base~~ check for empty

```
void display (struct stack s) {
```

```
    if (s->top == -1) {
```

```
        printf("No items in stack\n");
```

```
    }
```

```
for (int i = 0; i <= s->top; i++) {  
    printf("%d ", s->arr[i]);
```

```
for (int i = s->top; i >= 0; i--) {  
    printf("%d ", s->arr[i]);
```

```
}  
printf("\n");
```

```
}
```