01/01 Stacks POP & PUSH

```
#include <stdio.h>
# define MAX 5
int top = -1;
int stack [MAX];
void push (int value) {
    if (top == MAX - 1){
        printf ("Stack Overflow"); }
        else {
            top ++;
            stack [top] = value;
            Printf ("Succesfully Added");
    }
    void pop () {
        if (top == -1) {
            printf ("Stack Underflow"); }
        else{
            printf ("%d has been removed from Stack", stack [top]);
            top --;
        }
}
void display (){
    if (top == -1){
        printf ("Stack Underflow");
        }else{
    for (int i = 0; i <= top; i++){
        printf ("%d\t", stack[i]);
    }
}
}
```

```
void main(){
  int choice, boolean=1; value;
  while(boolean)
   printf("1.PUSH\n2.POP\n3.DISPLAY\n4.EXIT.");
   scanf("%d", &choice);
  switch(choice){
  case 1: scanf("%d", value);
          push(value);
          break;
  case 2: pop();
          break;
  case 3: display();
          break;
  case 4: boolean=0;
          break;
  default: printf("Invalid Input");
  }
}
}
```

```
o/p: 1. PUSH
     2. POP
     3. DISPLAY
     4. EXIT
     1
     5
     Succesfully Added.
     1. PUSH
     2. POP
     3 DISPLAY
     4. EXIT
     3
     5
```

```
o/p: 1. PUSH
     2. POP
     3. DISPLAY
     4. EXIT
     2
     8 has been removed from the Stack.
     1. PUSH
     2. POP
     3. DISPLAY
     4. EXIT
     1
     8
     Succesfully Added.
```

C:\Users\User\Desktop\1BM22CS312\stack.exe

```
1. Push
2. Pop
3. Display
4. Exit
1
Enter a value: 22
Successfully Added
1. Push
2. Pop
3. Display
4. Exit
1
Enter a value: 31
Successfully Added
1. Push
2. Pop
3. Display
4. Exit
3
22      31
1. Push
2. Pop
3. Display
4. Exit
```