```
#include <stdio.h>
#include <stdlib.h>
#include <conio.h>
#define total 20
struct prog
{
	int arr[total];
	int top;
}stack;

int isfull()
{
	if(stack.top<total)
	{
		return 1;
	}
	else
	{
		return 0;
	}
}

int isempty()
{
	if(stack.top==-1)
	{
		return 1;
	}
	else
	{
		return 0;
	}
}
void push()
{
	if(isfull())
	{
		printf("Enter the Number to push\n");
		scanf("%d",&stack.arr[++stack.top]);
		printf("--------------------------------\n");
		printf("pushed %d successfully\n",stack.arr[stack.top]);
		printf("--------------------------------\n");

	}
	else
	{
		printf("--------------------------------\n");
		printf("Stack overflow\n");
```

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

void pop()
{
        if(isempty())
        {
                printf("--------------------------------\n");
                printf("Stack Underflow\n");
                printf("--------------------------------\n");
        }
        else
        {
                printf("--------------------------------\n");
                printf("Successfully popped %d\n",stack.arr[stack.top--]);
                printf("--------------------------------\n");
        }
}

void peek()
{
        if(stack.top==-1)
        {
                printf("--------------------------------\n");
                printf("Stack Underflow\n");
                printf("--------------------------------\n");
        }
        else
        {
                printf("--------------------------------\n");
                printf("Value at top of stack is %d\n",stack.arr[stack.top]);
                printf("--------------------------------\n");
        }
}

void display()
{
        int i;
        if(stack.top==-1)
        {
                printf("--------------------------------\n");
                printf("Stack Underflow\n");
                printf("--------------------------------\n");
        }
        else
        {
                printf("--------------------------------\n");
```

```
                for(i=stack.top;i>=0;i--)
                {
                    printf("%d at index %d\n",stack.arr[i],i);
                }
                printf("--------------------------------\n");
        }
}

int main(void)
{
        stack.top=-1;
        clrscr();
        int a;
        while(1)
        {
                printf("\n\nEnter your command\n");
                printf("1 for push\n2 for pop\n");
                printf("3 for peek\n4 for display\n");
                printf("5 for clear screen\n6 to exit\n");
                scanf("%d",&a);
                switch(a)
                {
                        case 1:{push(); break;}
                        case 2:{pop(); break;}
                        case 3:{peek(); break;}
                        case 4:{display(); break;}
                        case 5:{clrscr(); break;}
                        case 6:{printf("Thank You");exit(0);}
                        default:{printf("Please enter a valid number\n"); break;}
                }
        }
}
```