

LAB PROG 1

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Date

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1. Write a prog to simulate the working of stack using an array with the following
- a) push b) pop c) display
- The prog should print app msgs for stack overflow & stack underflow

```
#include <stdio.h>
#define STACK_SIZE 5
int top = -1;
void push(int item /int/s[], int
```

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

```
#include <conio.h>
```

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

```
#define STACK_SIZE 5
```

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

```
int s[10];
```

```
int item;
```

```
void push()
```

```
{
```

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

```
{
    printf("Stack overflow\n");
    return;
```

```
}
```

```
top = top + 1;
```

```
s[top] = item;
```

```
}
```

```
int pop()
```

```
{
```

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

```
{
```

```

printf("Stack is empty\n");
return;
}
printf("Contents of the stacks\n");
for (i=0; i<=top; i++)
{
    printf("%d\n", S[i]);
}
}

void main()
{
    int item-deleted;
    int choice;
    clrscr();
    for(;;)
    {
        printf("1: Push\n 2: Pop\n 3: Display\n 4: Exit\n");
        printf("Enter your choice\n");
        scanf("%d", &choice);
        switch (choice)
        {
            case 1:
                printf("Enter the item to be inserted\n");
                scanf("%d", &item);
                push();
                break;
            case 2: item-deleted = pop();
                if (item-deleted == -1)
                    printf("Stack is empty\n");
                else.

```

$$a + b * (c^d - e)^f (f + g * h) - i$$

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```
printf("Item deleted as -1.\n", item_deleted);
    break;
```

```
case 3: display();
    break;
```

```
case 4: default: exit(0);
    }
}
```

```
getch();
}
```

$$a + b * (c^d - e)^f (f + g * h) - i$$