RAVI SAJJANAR(1BM19CS127)

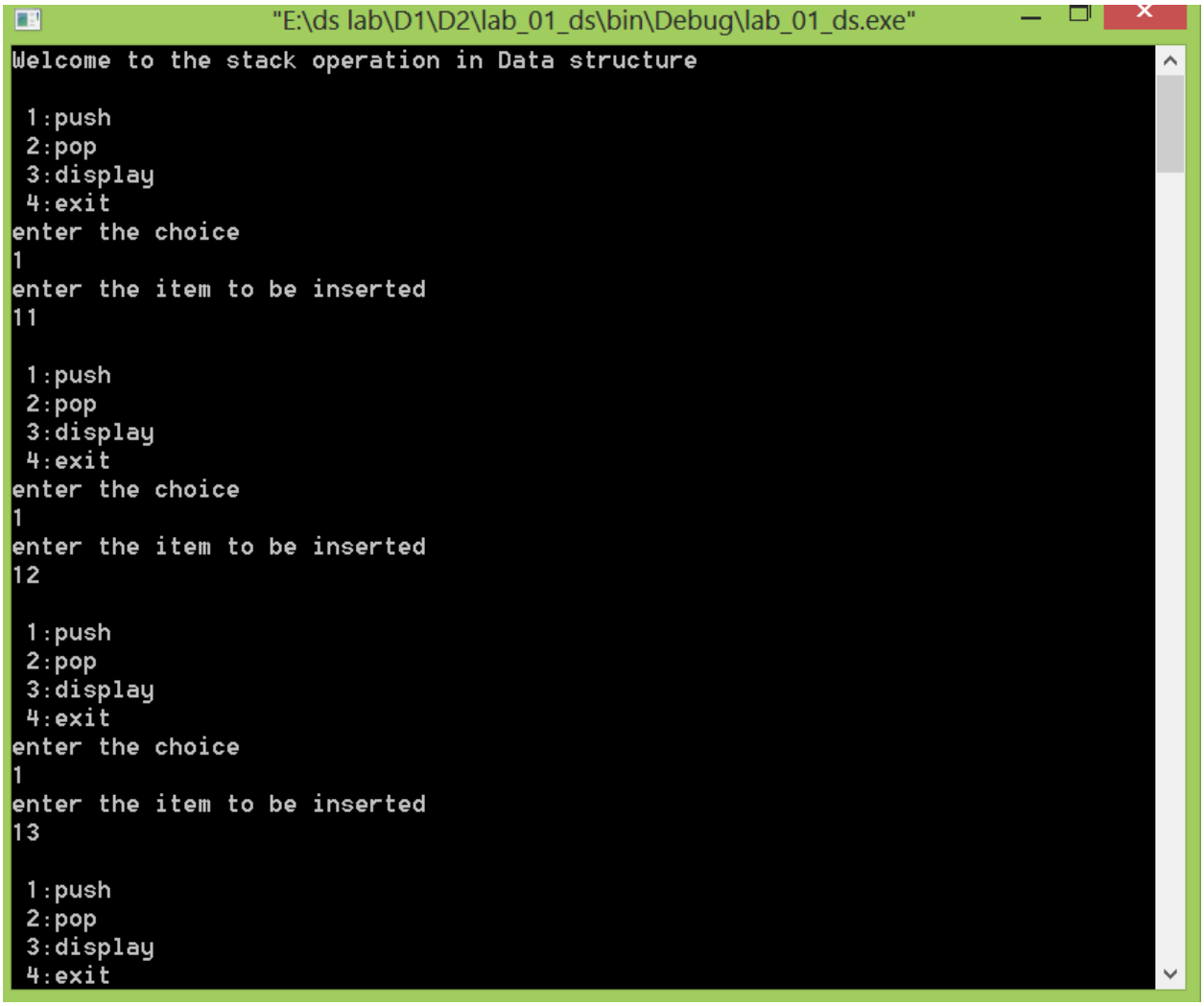
PROGRAM:1

```
#include <stdio.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 over_flow\n");
      return;
   }
   top=top+1;
   s[top]=item;
}

int pop()
{
   if (top==-1)
      return -1;
   return s[top--];
}

void display()
{
   int i;
   if(top==-1)
```

```
    {
        printf("Stack is empty\n");
        return;
    }
    printf("contents of the stack\n");
    for (i=top;i>=0;i--)
    {
        printf("%d\n",s[i]);
    }
}

void main()
{
  int item_deleted;
  int choice;

  for(;;)
  {
      printf("\n 1:push \n 2:pop \n 3:display \n 4:exit\n" );
      printf("enter the 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
             printf("item_deleted is %d\n",item_deleted);
            break;
        case 3: display();
            break;
        default : exit(0);

    }
  }
}
```

OUTPUT:



```
enter the choice
1
enter the item to be inserted
14

 1:push
 2:pop
 3:display
 4:exit
enter the choice
1
enter the item to be inserted
15

 1:push
 2:pop
 3:display
 4:exit
enter the choice
1
enter the item to be inserted
16
Stack over_flow

 1:push
 2:pop
 3:display
 4:exit
enter the choice
3
contents of the stack
15
14
```

```
15
14
13
12
11

 1:push
 2:pop
 3:display
 4:exit
enter the choice
2
item_deleted is 15

 1:push
 2:pop
 3:display
 4:exit
enter the choice
2
item_deleted is 14

 1:push
 2:pop
 3:display
 4:exit
enter the choice
2
item_deleted is 13

 1:push
 2:pop
 3:display
```

```
 3:display
 4:exit
enter the choice
2
item_deleted is 12

 1:push
 2:pop
 3:display
 4:exit
enter the choice
2
item_deleted is 11

 1:push
 2:pop
 3:display
 4:exit
enter the choice
2
Stack is empty

 1:push
 2:pop
 3:display
 4:exit
enter the choice
4

Process returned 0 (0x0)   execution time : 33.933 s
Press any key to continue.
```