```
//lab program 1
#include <stdio.h>
#include <conio.h>
#define stack_size 5
int top=-1;
int s[10];
int item;
void push()
{
  if(top==stack_size-1)
  {
    printf("stack overflow");
    return;
  }
  else
  {
    top=top+1;
    s[top]=item;
  }
}
int pop()
{
  if(top==-1)
  {
    return -1;
  }
  else
  {
    return s[top--];
  }
```

```
}
void display()
{
  int i;
  if(top==-1)
  {
    printf("Stack empty");
    return;
  }
  else
  {
  printf("Contents of stack \n");
  for(i=top;i>=0;i--)
  {
    printf("%d\n",s[i]);
  }
  }
}
int main()
{
  int item_deleted;
  int choice;
  for(;;)
  {
    printf("\n1.push 2.pop 3.display 4.exit \n");
    printf("enter choice \n");
    scanf("%d",&choice);
    switch(choice)
      case 1:printf("Enter Item : ");
```

```
scanf("%d",&item);
        push();
        break;
    case 2:item_deleted=pop();
        if(item_deleted==-1)
        {
         printf("stack empty \n");
        }
        else
        {
         printf("item deleted is %d\n",item_deleted);
        }
        break;
    case 3:display();
        break;
    default:exit(0);
 }
}
getch();
```

```
input

1.push 2.pop 3.display 4.exit
enter choice

1
Enter Item : 10

1.push 2.pop 3.display 4.exit
enter choice

1
Enter Item : 20

1.push 2.pop 3.display 4.exit
enter choice

2
item deleted is 20

1.push 2.pop 3.display 4.exit
enter choice

3
Contents of stack

10

1.push 2.pop 3.display 4.exit
enter choice

4

...Program finished with exit code 0
```

```
#include (8tdio. 47
 # include < process. h7
 #include (Corrio. h7
 # define STACK_Size 5
 int | top = -1;
 int 8[10];
 int item;
 roid push ()
 print f (« stack overflow in »);
top = top+1;
8[top] = iten;
int pop ()
ij (top ==-1) return -1;
return Stop--7;
roid olisplay()
 unt i;
else return;
    printf ( " contents of the Stade 12");
```

```
printf (ce old In? ssid);
roid main ()
  unt item, deleted;
  list Choice;
  fort;;)
   prointfice In 1. push In 2. pop In 3. display in 4. exit in");
   printflee Enter Choice In ")
   Scanflee of d ? 3 choice)
   Switch ( Chroice)
    Case 1: printfle enter the item ");
         Scanfice of.d" sitem);
        purh();
          break;
     (ase 2: item-deleted = pop();
            if (item_deleted == -1)
            printflee Stack empty in");
            Print f (ee item deleted is "I d In", item-deleted)
           treak;
      Case 3: display ();
          break
      defautt: exit (0);
   getch();
```

