```
        printf(" Invalid Credentials! Please try
                again! ");
    }
}
```

9-2020

LAB. P1:- Write a program to simulate the working of STACK using an array with the following:- (a) push, (b) pop (c) display. The program should print appropriate messages for STACK OF & UF.

```
#include <stdio.h>
#include <conio.h>
#include <process.h>
#define STACK_SIZE 5
int top = -1;
int s[5];
int item;
void push()
{
  if (top == STACK_SIZE - 1)
{ printf(" STACK OVERFLOW, cannot push
        more elements into the stack!"); return; }
```

```
else
{
    top = top + 1;
    s[top] = item;
}
int pop()
{
 if (top == -1)
 {
   printf("STACK UNDERFLOW, no elements in the
    stack \n");
   return 0;
 }
 else
    return & s[top--];
}
void display()
{
 if (top == -1)
 {
   printf("STACK UNDERFLOW, no elements to
    display \n");
   return;
 }
 else
 {
```

```
printf("The elements of the stack : \n");
for (i=0; i<=top; i++)
{
    printf("%d \n", s[i]);
}
}
void main()
{
    int choice, item_deleted;
    clrscr();
    for(;;)
    {
    printf(" Enter: \n 1. push \n 2. pop \n 3. display \n
4. exit \n");
    scanf("%d", &choice);
    switch (choice)
    {
    case 1: printf(" Enter the element to be
            inserted \n");
            scanf("%d", &item);
            push();
            break;
    case 2:
```

```
{
  item_deleted = pop();
  if (item_deleted != 0)
  printf("Item popped = %d \n", item_deleted);
  break;
 }
case 3: display();
        break;
default: exit(0);
}
}
getch();
}
```