LAB Program 1 Date :- 28/09/2020

Stack Implementaion

Write a program to simulate the working of stack using an array with following

The ~~progrgram~~ pragram should display appropriate message for overflow and underflow

```
#include <stdio.h>
#define stack_size 5
int top = -1, s[10], item;
void push ()
{   if (top = stack_size-1)
      { printf ("Stack overflow! cannot push item.\n");
        return; }
    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 is empty.\n");
```

```
    else
        printf("The contents of stack : \n");
        for(i=top; i>=0; i--)
            printf("%d ", s[i]);
}
int main()
{ int deleted, choice;
  for(;;)
  { printf("Menu \n1: Push \n2 Pop \n");
    printf("3 Display \n4 Exit \n");
    Printf("Enter your choice : ");
    scanf("%d", &choice);
    switch (choice)
    { case 1: printf("Enter item to be inserted : ");
              scanf("%d", &item);
              push();
              break;
      case 2: deleted = pop();
              if(deleted == -1)
                  printf("Stack underflow! can't pop");
              else
                  printf("Item deleted is %d", deleted);
              break;
      case 3: display();
              break;
      default: exit(0);
    }
  }
}
```