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IBM19CS061

1) Write a Program to show the working of Stack using Array with following :-

    a) Push   b) Pop   c) Display

the Program Should print ~~output~~ appropriate message for Stack overflow & underflow.

```c
#  int top

#  include <stdio.h>
#  include <process.h>
#  define  STACK_SIZE  5
  int  top = -1 , st [10];
  Void  push ();
  Void  Pop ();
  Void  display ();
  Void  main ()
  {
        int ch;
        for (;;)
        {
            printf (" \n STACK MENU ");
            printf (" \n\n 1. Push \n 2. Pop \n 3. Display
                     \n 4. Exit");
            printf ("\n Enter  your  choice: ");
            scanf (" %d", &ch);
            switch (ch)
            {
```

```c
        Case 1:    push();
                   break;
        Case 2:    pop();
                   break;
        Case 3:  display();
                   break;

        Case 4:   exit(0);
        default:  printf("\n Invalid option !!");
                }
              }
           }
        }
Void push()
{
    int item();
    if(top == STACK_SIZE - 1)
    {
        printf("\n STACK OVERFLOW \n");
    }
    else
    {
        printf("\n Enter element to be
                      entered in Stack :");

        scanf("%d", &item);

        top = top + 1;

        st[top] = item;
    }
}
Void pop()
{
    if(top == -1)
    {
```

```c
            printf (" \n the Stack Underflow \n");
        }
        else
        {
            printf (" \n The value deleted from
                        Stack     is :    %d, st[top]);
            top = top -1;
        }

    }

Void display ()
{
    int i;
    if ( top == -1)
    {
        printf (" \n Stack is empty \n");
    }
    else
    {
        printf (" \n Contents of the Stack are :\n")
        for (i = top; i >= 0; --i) \n);
            printf (" %d \n", st[i]);

    }

}
```