

Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: DS (2CSE302)
MIDSEM - 1

PRACTICAL-EXAM

AIM: - Akshar is working at admin Department of Ganpat University. He wants to create a simple encode for each string by reversing it. For a given string "DataQuiz", it should be converted to "ziuQataD" (Reverse string). Kindly follow the given scenario and provide appropriate solution to reverse the string in C using stack. Create an empty character stack of maximum size 10 and the perform push and pop operation with element display.

SOLUTION

```
//header files
#include <stdio.h>
#include <string.h>
#define MAX 10

//global variables
int Top=-1;
int x;
char Yash[MAX];

//push function
void Push(char x)
{
    if(Top==MAX-1)
    {
        printf("\nOverflow...\n");
    }
    else
    {
        Top=Top+1;
        Yash[Top]=x;
    }
}

//pop function
char Pop()
{
    if(Top== -1)
    {
```

```
        printf("\nStack is Empty...\n");
    }
    else
    {
        x=Yash[Top];
        Top=Top-1;
    }
    return x;
}

//main code
int main()
{
    char Yash[MAX];
    int i;

    //user input
    printf("\nEnter the string: ");
    scanf("%s",Yash);

    //pushing string
    for(i=0;i<strlen(Yash);i++)
    {
        Push(Yash[i]);
    }
    //popping string
    for(i=0;i<strlen(Yash);i++)
    {
        Yash[i]=Pop();
    }

    printf("Reversed String is: %s\n\n",Yash);
    return 0;
}
```

OUTPUT

