**Practical 3**

Implement a program for Stack that performs following operations using array: (a) PUSH (b) POP (c) CHANGE (d) DISPLAY

**#include<stdio.h>**

**#include<conio.h>**

**#include<stdlib.h>**

**#define size 5**

**struct stack {**

**int s[size];**

**int top;**

**}st;**

**void push(int item) {**

**if (st.top >= size - 1)**

**{**

**printf("Stack Overflow");**

**return;**

**}**

**st.top++;**

**st.s[st.top] = item;**

**}**

**int pop() {**

**int item;**

**if (st.top == -1)**

**{**

**printf("Stack Underflow");**

**return 1;**

**}**

**st.top--;**

**return (st.s[st.top+1]);**

**}**

**void change(int p,int q) {**

**if(st.top-p+1<=-1)**

**printf("stack is underflow for change");**

**else**

**{**

**st.s[st.top-p+1] = q;**

**printf("\nThe value at %d position is changed to : %d\n",p,q);**

**}**

**}**

**void display() {**

**int i;**

**if (st.top==-1)**

**printf("\nStack Is Empty!");**

**else {**

**for (i = st.top; i >= 0; i--)**

**printf("\n%d", st.s[i]);**

**printf("\n");**

**}**

**}**

**int main()**

**{**

**int item, choice,p,q;**

**char ans;**

**st.top = -1;**

**printf("\n\tImplementation Of Stack");**

**do**

**{**

**printf("\nMain Menu");**

**printf("\n1.Push 2.Pop 3.Change 4.Display 5.exit");**

**printf("\nEnter Your Choice");**

**scanf("%d", &choice);**

**switch (choice) {**

**case 1:**

**printf("Enter The item to be pushed: ");**

**scanf("%d", &item);**

**push(item);**

**break;**

**case 2:**

**item = pop();**

**printf("\nThe popped element is %d", item);**

**break;**

**case 3:**

**printf("\nEnter the position for change :");**

**scanf("%d",&p);**

**printf("\n Enter the value :");**

**scanf("%d",&q);**

**change(p,q);**

**break;**

**case 4:**

**display();**

**break;**

**case 5:**

**exit(0);**

**}**

**printf("Do You want To Continue?(y/n)");**

**ans = getche();**

**} while (ans == 'Y' || ans == 'y');**

**return 0;**

**}**