18/12/23

LAB-2

⇒ Program to implement Push, Pop, display

1)

```
#include <stdio.h>
#define n 5
int s[5], top = -1;
void push()
{
  if (top == (n-1))
  {
    printf("Stack is full stack overflow. \n");
  }
  else
  {
    int item;
    printf("Enter the element : \n");
    scanf("%d", &item);
    top++;
    s[top] = item;
  }
}

void pop()
{
  if (top == -1)
  {
    printf("Stack is empty - stack underflow \n");
  }
  else
  {
    printf("popped element is : %d \n", s[top]);
    top--;
  }
}
```

```
void display()
{
    int i;
    if (top >= 0)
    {
        for (i=top; i>=0; i--)
        {
            printf("%d", s[i]);
        }
        print("\n");
    }
    else
        printf("Stack is empty \n");
}
void main()
{
    int choice;
    while(1)
    {
    printf("\n 1 for push\n2 for pop\n3 for display\n
      4 to exti exit \n");
    printf("Enter the choice");
    scanf("%d", &choice);
    switch (choice){
      case 1: push();
              break;
      case 2: pop();
              break;
      case 3: display();
              break;
      case 4: exit(0);
      default:
          printf("Enter a valid option\n");
    }
  }while (choice != 4);
}
```

Output:-

1. push
2. POP
3. Display
4. Quit

Enter the option:

1

Enter the element:

10

1. Push
2. POP
3. display
4. Quit

Enter the option:

1

Enter the element:

20

1. push
2. pop
3. display
4. Quit

Enter the option:

2

Enter the element:

Popped element is : 20

1. push
2. POP
3. display
4. Quit

Enter the option:

3.

5

18/12/23

1. push
2. POP
3. Display
4. Quit

Enter option:

4.