LAB PROGRAM-1

```
#include<stdio.h>
void push();
void pop();
void display();
int stack[50], i, j, n, option = 0, top = -1;
void main()
{
    printf("Enter the number of elements in the stack");
    scanf("%d", &n);
    printf("[illegible]");

    while (option != 4)
    {
        printf("Choose one from the below options...\n");
        printf("\n1. Push\n2 Pop\n3. display\n4. Exit");
        printf("\n Enter your option\n");
        scanf("%d", &option);
        switch (option)
        {
            case 1:
            {
                push();
                break;
            }
            case 2:
            {
                pop();
                break;
            }
            case 3:
            {
                display();
                break;
            }
            case 4:
            {
                printf("Exit");
                break;
            }
            default:
            {
                printf("Clear Enter valid option");
            }
        }
    };
```

```
    }
}

void push()
{
    int value;
    if(top == n-1)
    printf("\n overflow");
    else
    {
        printf("Enter the value");
        scanf("%d", &value);
        top = top+1;
        stack[top] = value;
    }
}

void pop()
{
    if(top == -1)
    printf("Underflow");
    else
    top = top-1;
}

void display()
{
    for(i=top; i>=0; i--)
    {
        printf("%d\n", stack[i]);
    }
    if(top == -1)
    {
        printf("Stack is empty");
    }
}
```

output :-

Enter the number of elements in the stack :3

Choose one from the below options

1) Push
2) Pop
3) display
4) Exit

Enter your option

2

Enter the value

10

Choose one from the below options

1) Push
2) Pop
3) display
4) Exit

Enter your option

1

Enter the value 20

Choose one from the below options

1) Push
2) Pop
3) display
4) Exit

Enter your option

3

20

10