**Experiment 5 [Interfacing of Relay using 8051]**

**AIM:**

Write an assembly language program for **Interfacing of Relay using 8051**

**SOFTWARE REQUIRED:**

* Keil software 5
* Proteus 8 software

**KEIL PROCEDURE:**

1. Open the software, Click on project and open new version project.

2. Create a new project file

3. Enter AT89C51

4. Click NO

5. Click [Ctrl +N] and Type the code

6. Open project and click Build target

7. Open Build target and open source file and ADD, CLOSE

8. Click build target

9. Next debug start and stop

10. Open peripherals and select port 2

11. Now run the program in Debug

12. Open project and click optional properties and in that give output as hex file.

13. Create hex file.

**PROTEUS PROCEDURE:**

1. Open proteus by clicking run as administrator.
2. Open new project and enter the file name.
3. Click next, next, next and finish.
4. Click P symbol and search keyword and place the required components

The components required are:

* AT89C51
* G2RL-14B-CF-DC5
* Lamp
* OZ-SH-105D
* ULN2803
* VSINE

1. Connecting pin number 21 to 1 in ULN2803
2. Likewise, connect pin 10 to one end of RL-1 and other end to the pin 18 in ULN2803
3. Connecting RL-1 to Lamp
4. Right click and choose Dc to select Generator
5. Connect the generator to the Rl-1
6. Click generator and change to 5 volts
7. Select the hex file
8. Start the simulation process

**PROGRAM:**

**ORG 0000H**

**UP:SETB P2.0**

**ACALL DELAY**

**SJMP UP**

**DELAY:MOV R4,#18**

**H1:MOV R3,255**

**H2:DJNZ R3,H2**

**DJNZ R4,H1**

**RET**

**END**

**RESULT:**

Thus the program has been successfully verified and executed.

OUTPUT:

