

# DC Motor Direction Control Using 8051

## Aim:

To implement a DC Motor Direction Control Using 8051

## Apparatus Required:

Laptop with Keil uVision software  
Proteus Design Suite

## Algorithm:

1. Start the program.
2. Open C program text file.
3. Type the program.
4. Select the hex file creation before building the program.
5. Build/compile the program.
5. Start debugging.
6. Open Proteus Software & design circuit as per circuit diagram.
7. Copy the hex file to 8051 controller.
9. Simulate the circuit in Proteus software.

## Program :

```
#include <reg51.h>

sbit mp = P1^0; // P1.0

sbit mn = P1^1; // P1.1

void main(void)
{
    volatile unsigned int a; // volatile prevents some compilers from optimizing the delay away

    mp = 0;

    mn = 0;
```

```
while (1)
{
    mp = 1;

    mn = 0;

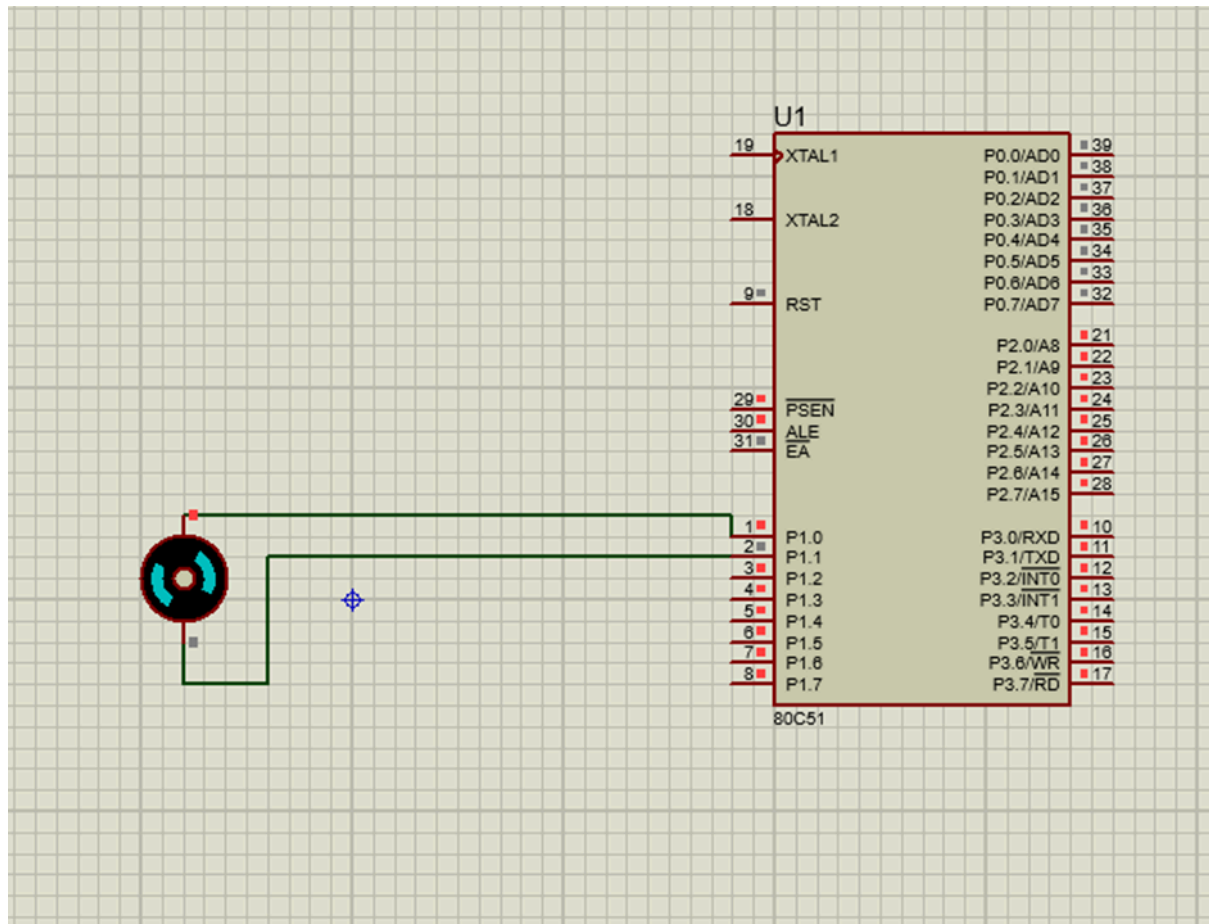
    for (a = 1; a < 40000; a++) {
        ; // empty delay loop
    }

    mp = 0;

    mn = 1;

    for (a = 1; a < 40000; a++) {
        ; // empty delay loop
    }
}
}
```

**Output :**



## Result:

The DC Motor direction control using 8051 microcontroller has been successfully implemented and simulated using Keil and Proteus.