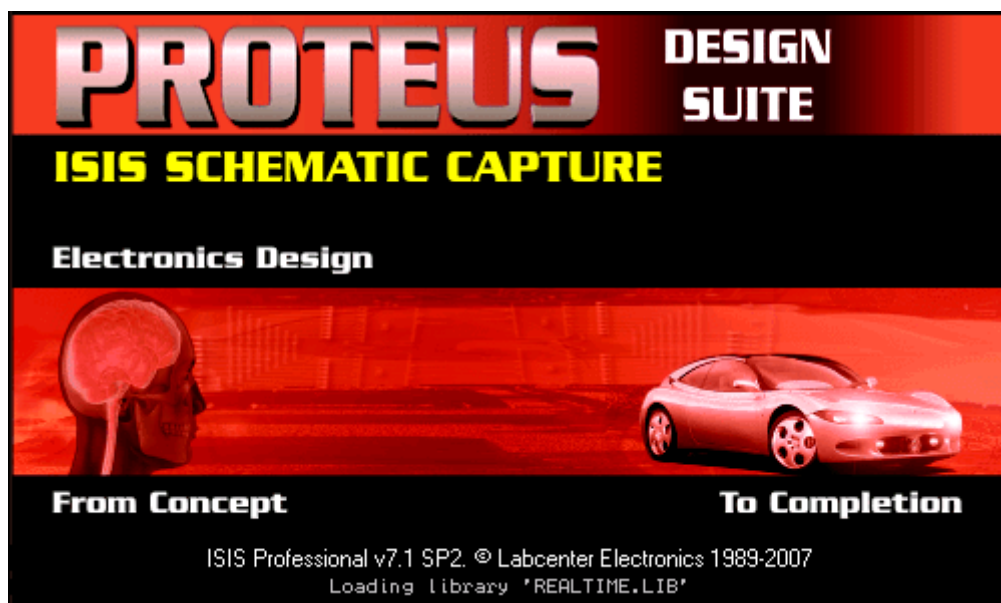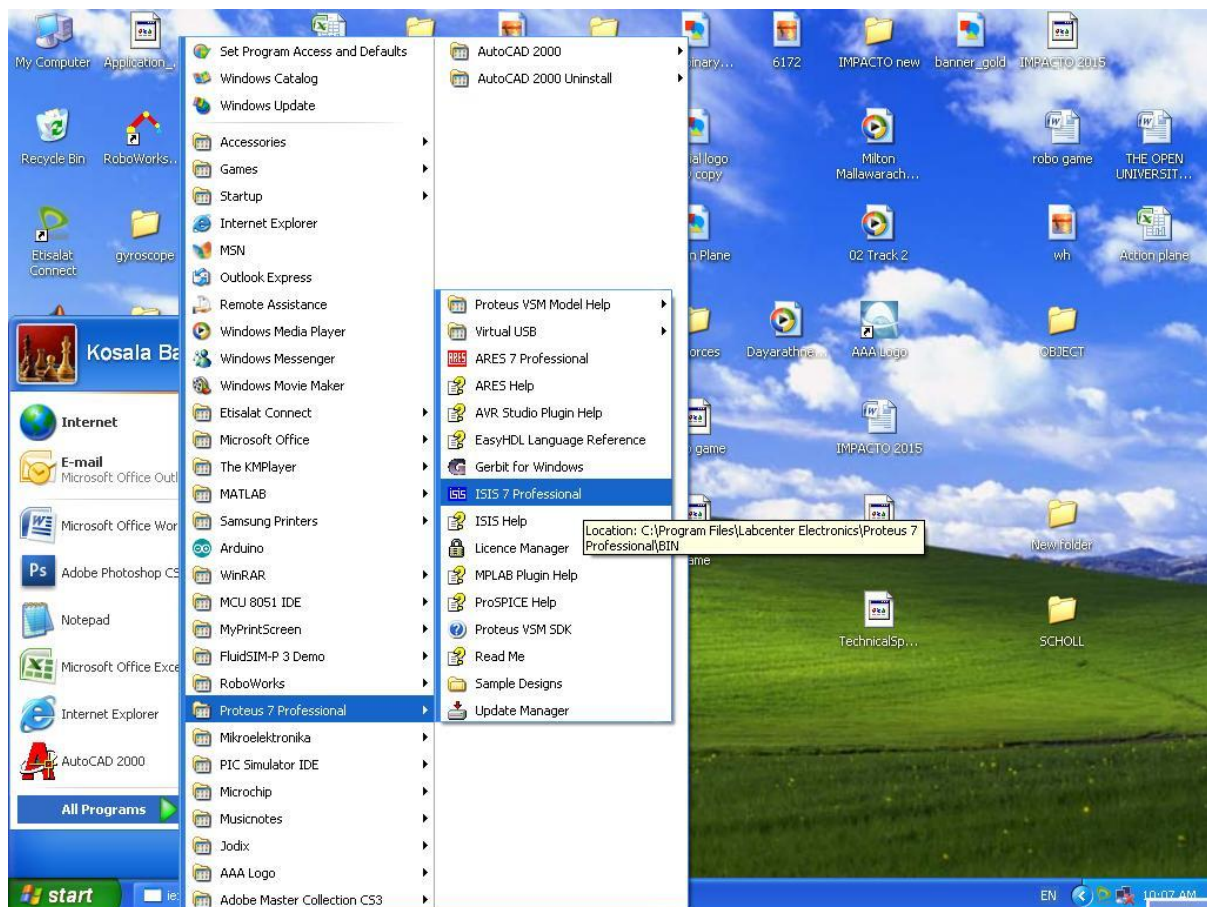# <u>Circuit Simulation</u>

The simulation is easy and simple method for identify the errors included in electrical or electronic circuits by using computers. In this tutorial we basically talk about simulator PROTEUS (ISIS).
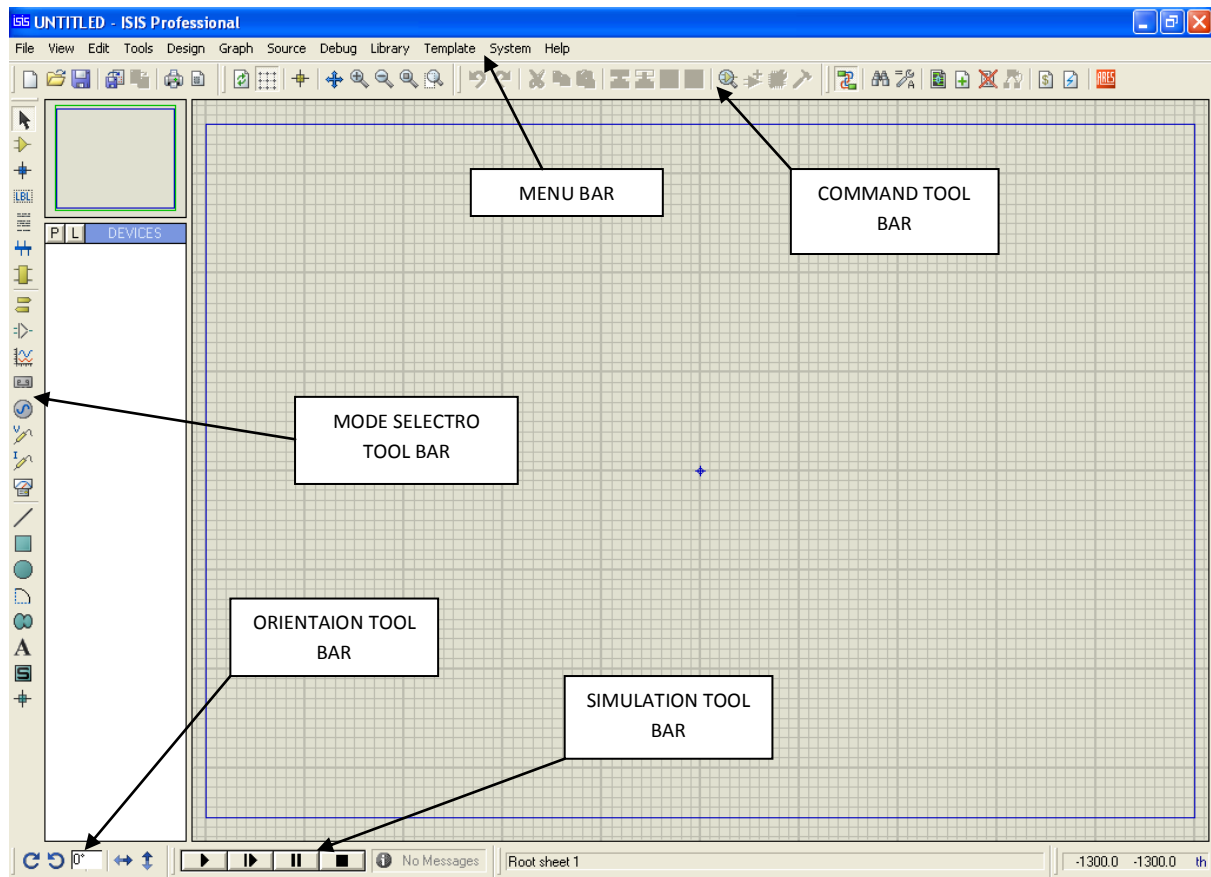
PROTEUS (ISIS simulator)

You can download proteus simulator from www.labcenter.com . After installation we can start…

- Let's start…

Start ⟶ All Programs ⟶ Proteus xx Professional ⟶ ISIS xx Professional

- Identify the components

The interface of the ISIS

The Menu Bar
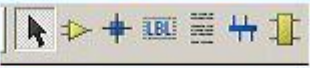
Menu bar in ISIS

The Toolbars

Command Toolbars

TITLE	TOOLBAR
File / Print Commands	
Display Commands	
Editing Commands	
Design Tools	

Mode Selector Toolbar

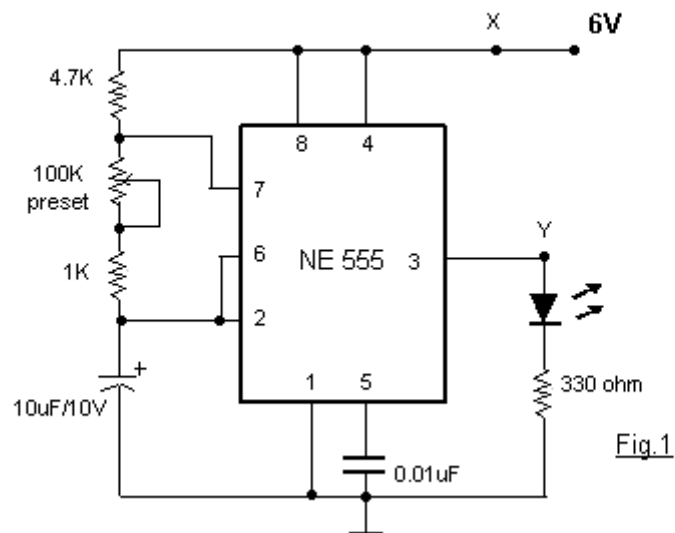| TITLE	TOOLBAR
Main Modes	
Gadgets	
2D Graphics	

Orientation Toolbar

TITLE	TOOLBAR
Rotation	
Reflection	

Simulation Toolbar
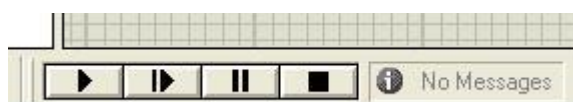
- Let's make circuit and simulate it….

Now we are going to make following multivibretor circuit using analog and digital components and simulate it,

Fig.1

Components need,

Resistors
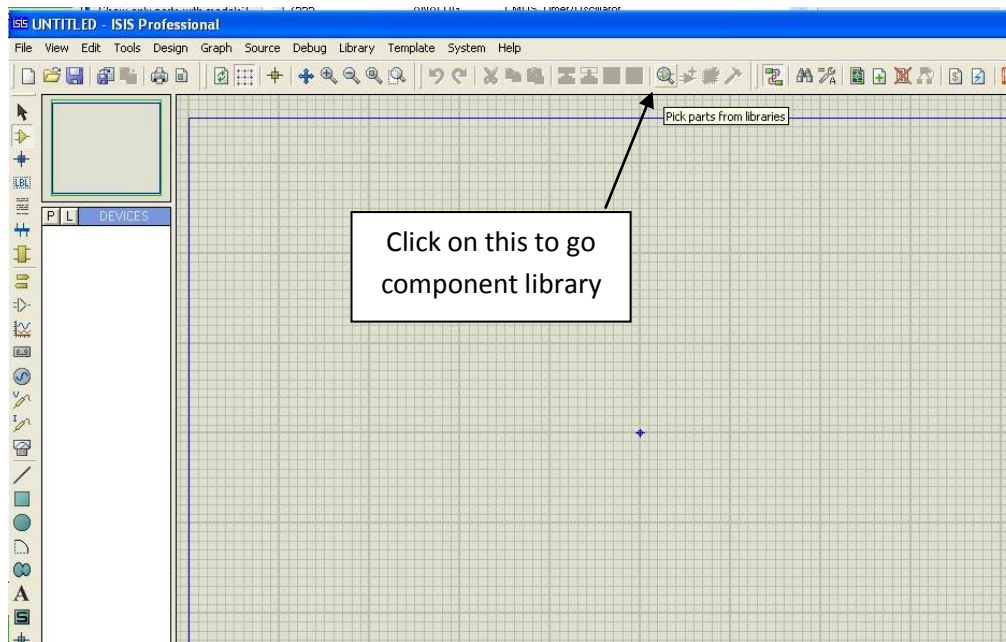4.7kΩ
1kΩ
330Ω
100k (variable resistor)
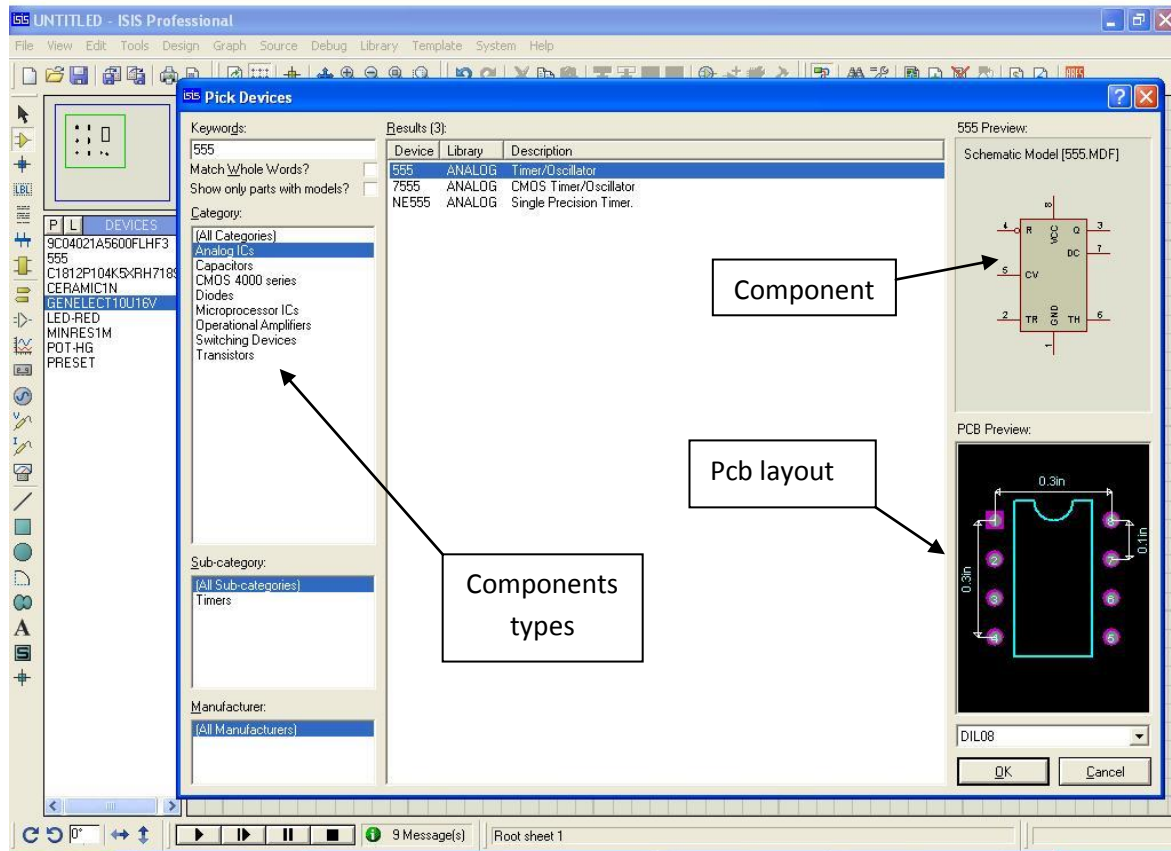
Capacitors
10uF
0.01uF

IC
NE555

LED
Power supply

- Step 1

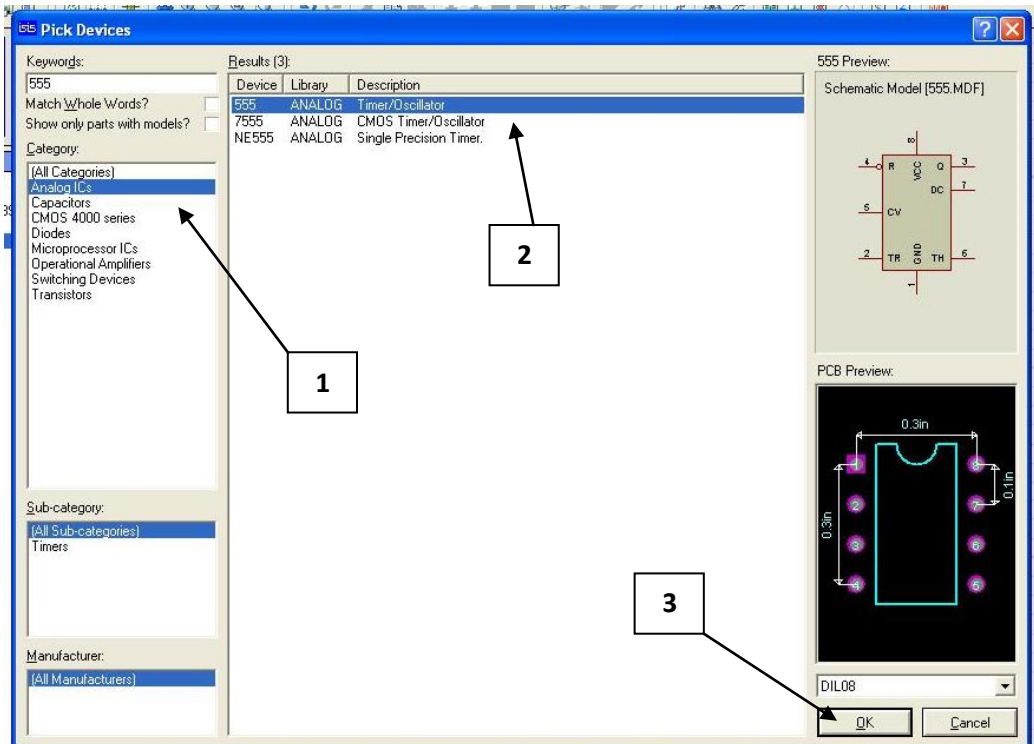 Choose required components from the component library in **editing commands.**

Click on this to go component library

Then appear following window (component library)

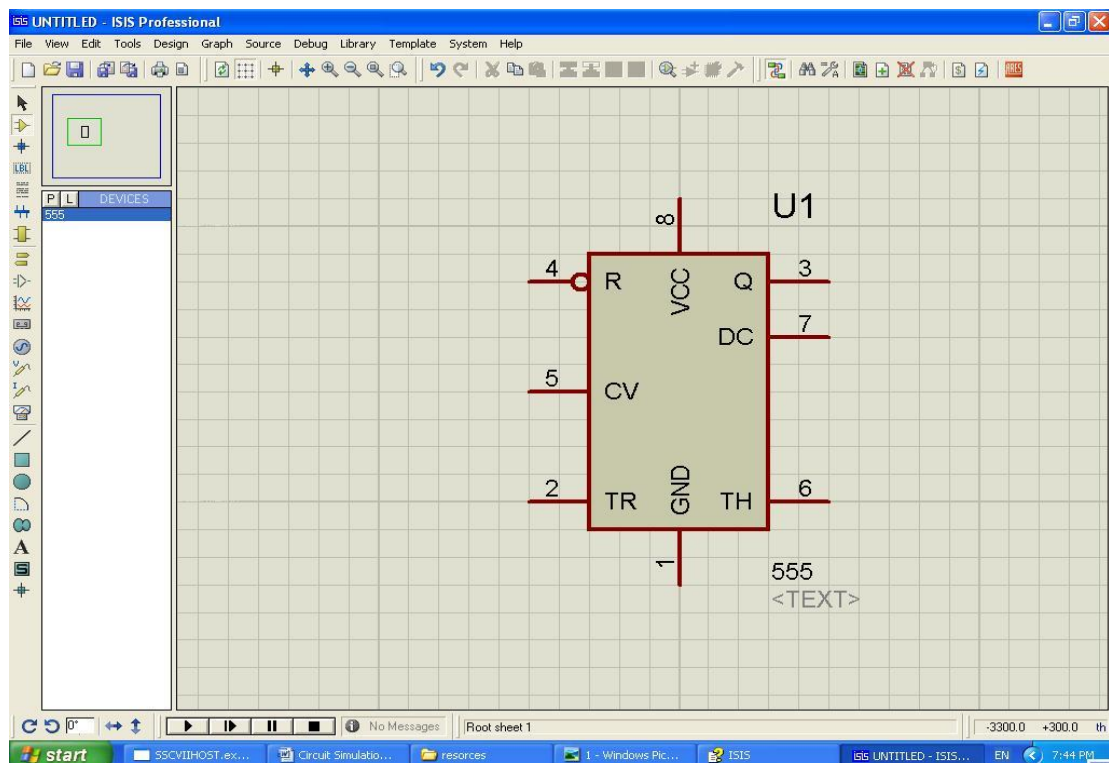Component
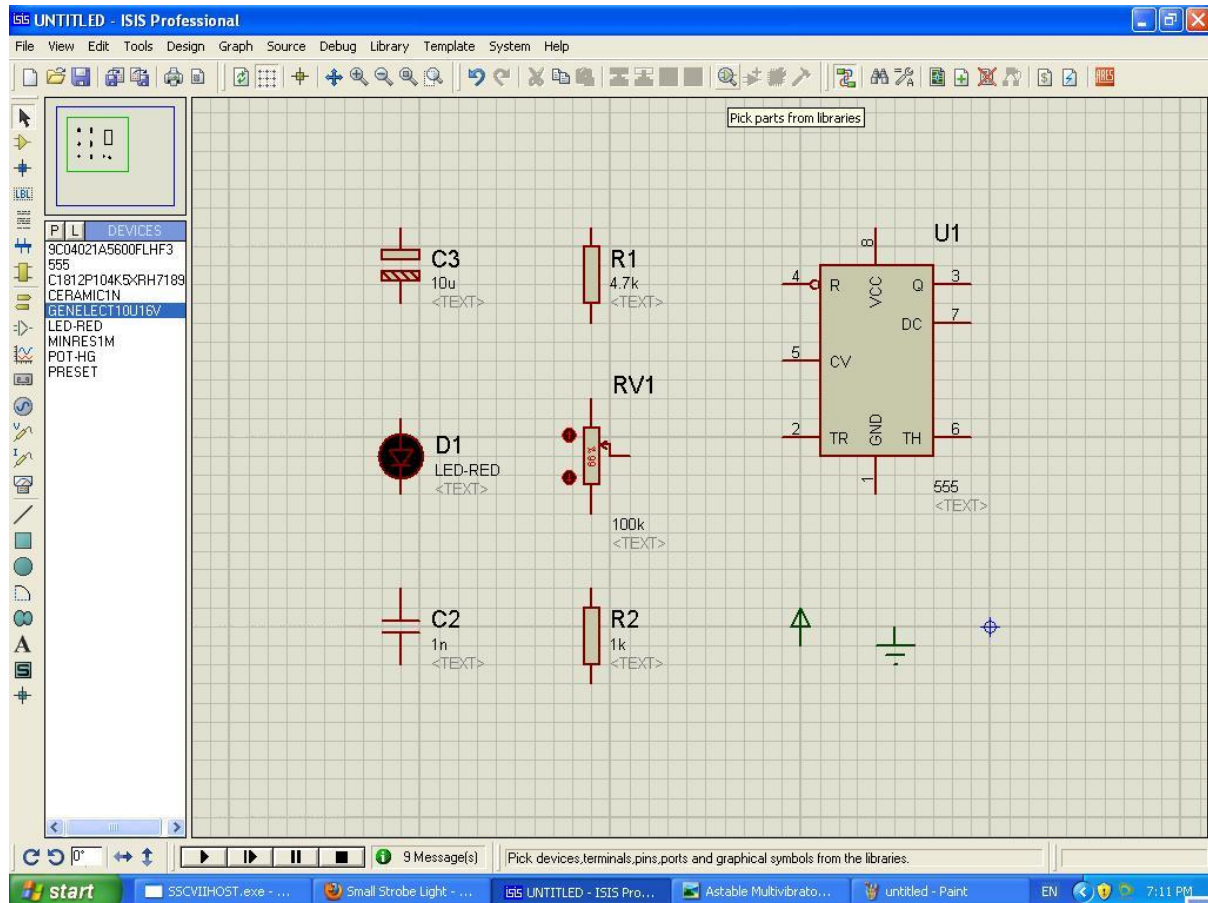
Pcb layout

Components types

- Step 2

    Then choose the all require components and put into the main window.

1. **Select "Analog ICs" in Category**
2. **Then select "555 ANALOG TIME/OSCILATOR"**
3. **Next click on OK**
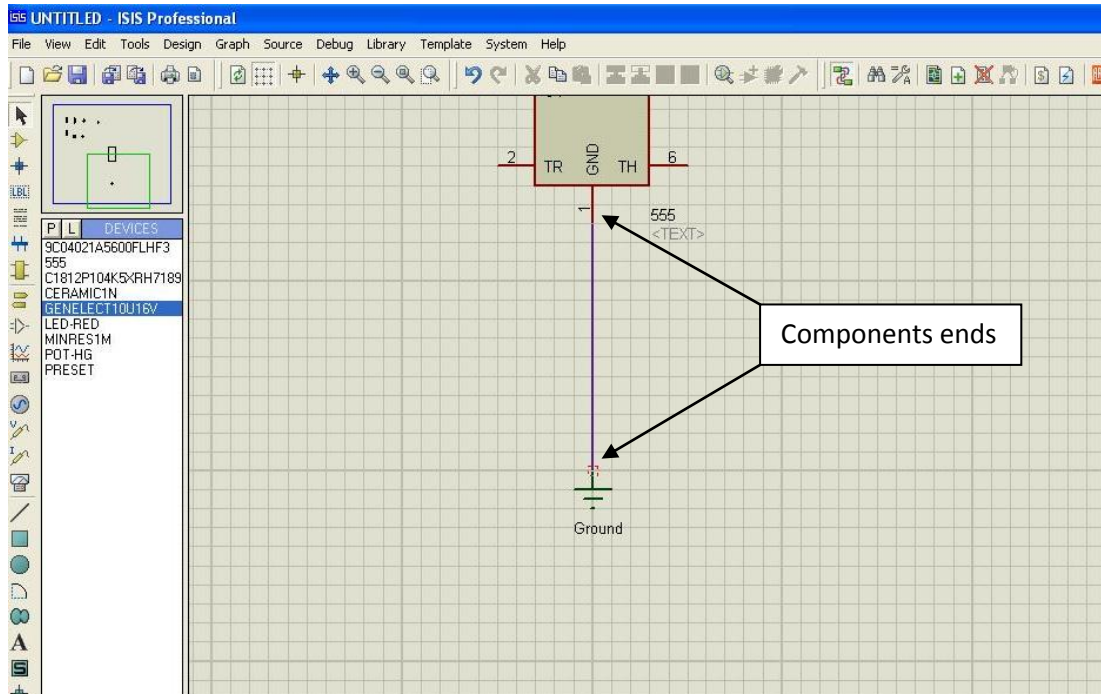4. **Finally component put into main window**

Same as doing above procedure put the all require components to main window.
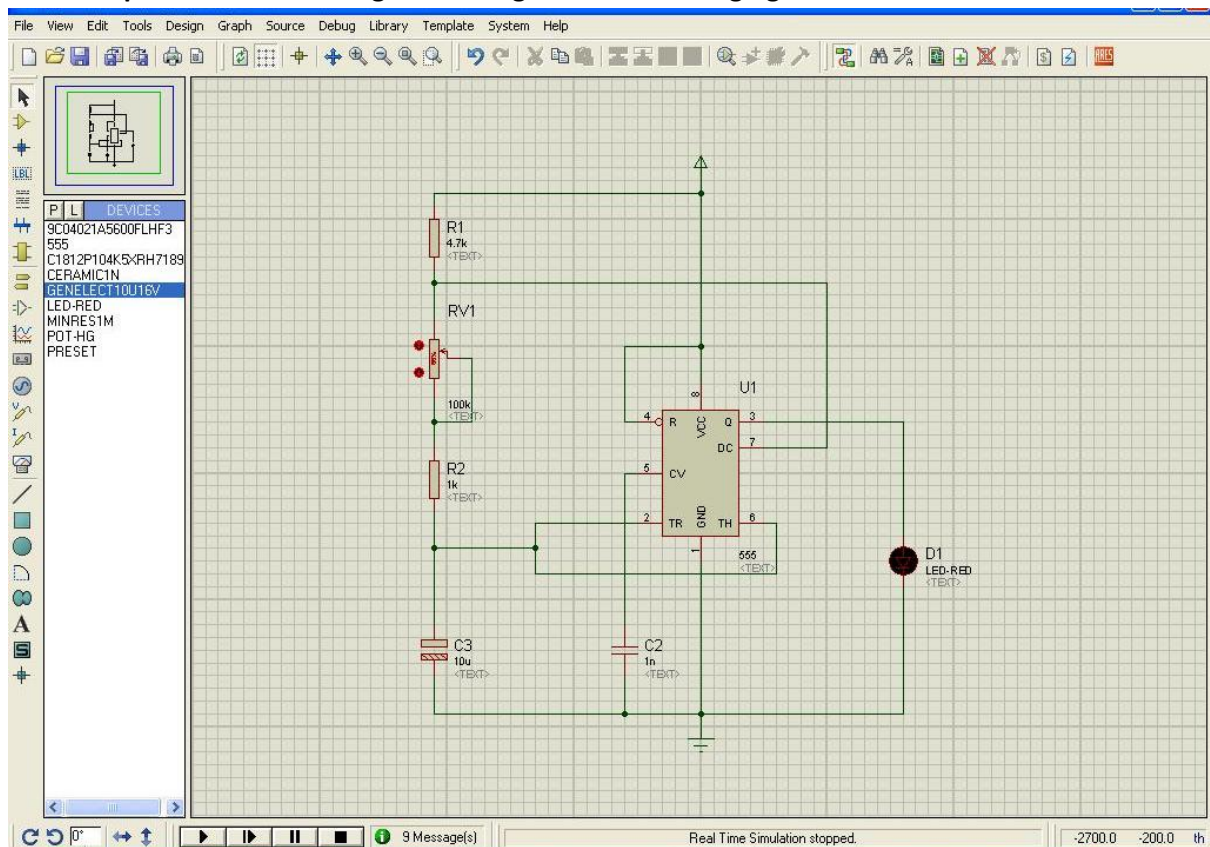
- Step 3

  Connect all the components as the above circuit diagram by using connecting lines. We can get connecting lines by selecting ends of the components as shows in following figure.
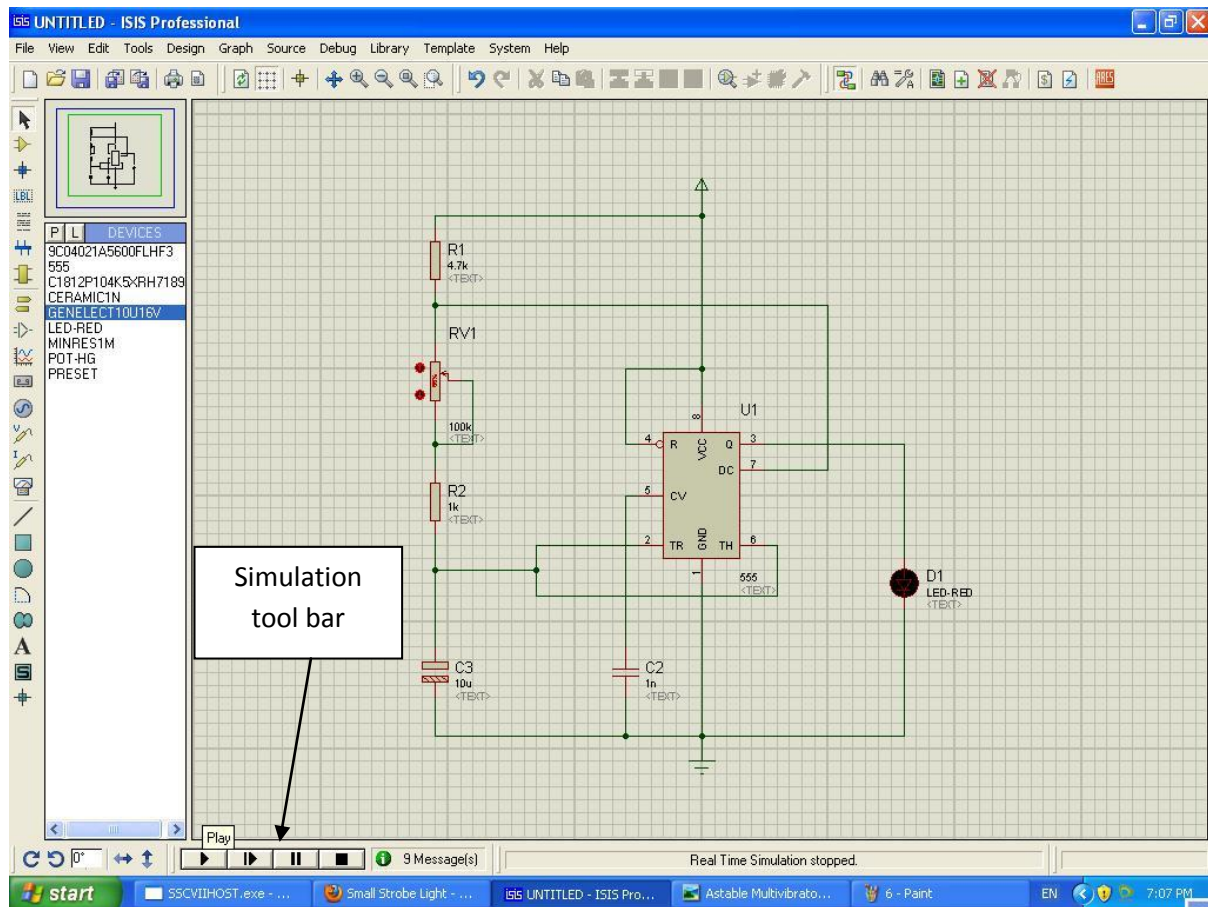

Then complete the circuit using connecting lines as following figure.....

- Step 4

  Now we are going to simulate our circuit….. (Make sure all the components correctly connected). Then go the **simulation tool bar.**
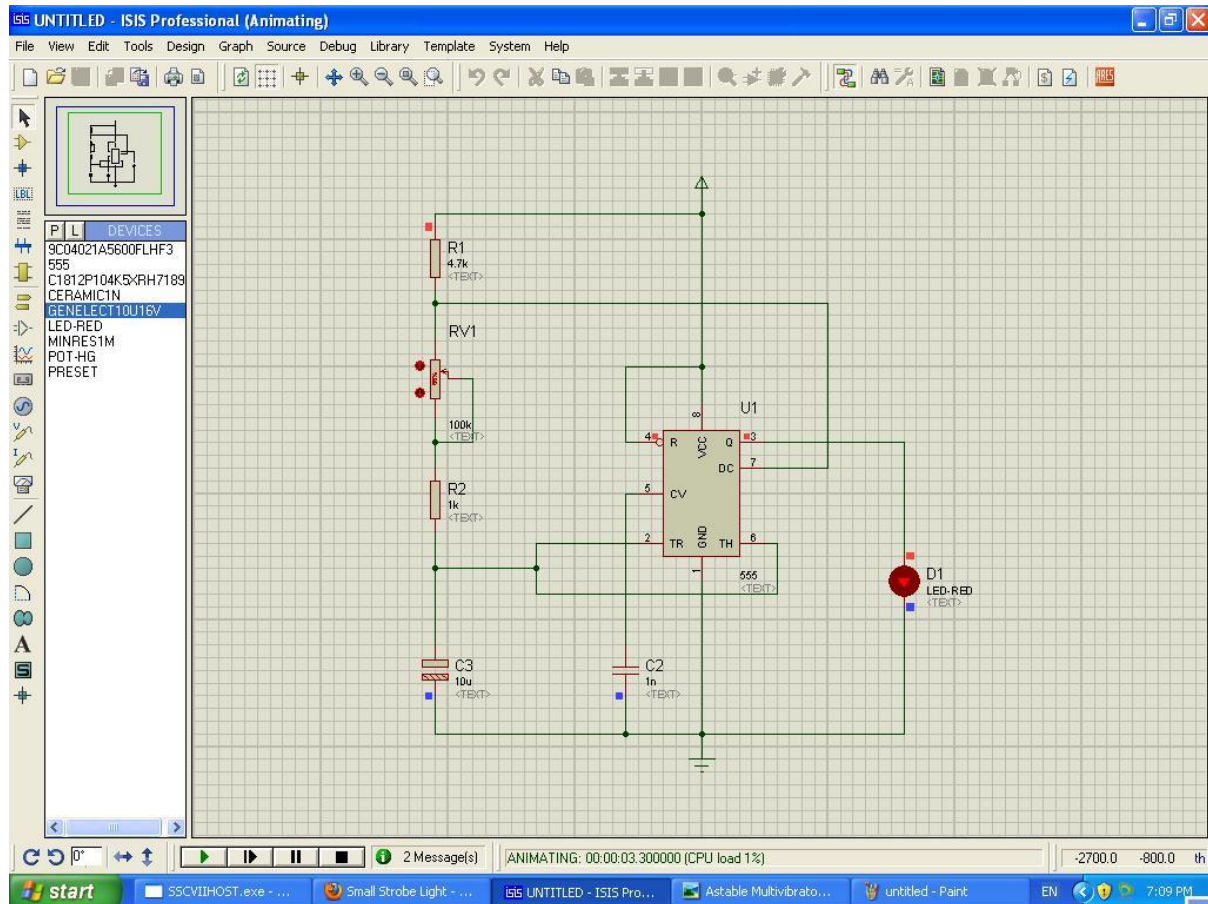

For start the simulation click on play button.

Then start the simulation if there are any errors the simulation must be fail and give error messages.

What happen to the LED during the simulation?

Don't west your time and money….
Make it easily and enjoy it…..
Use Proteus…..