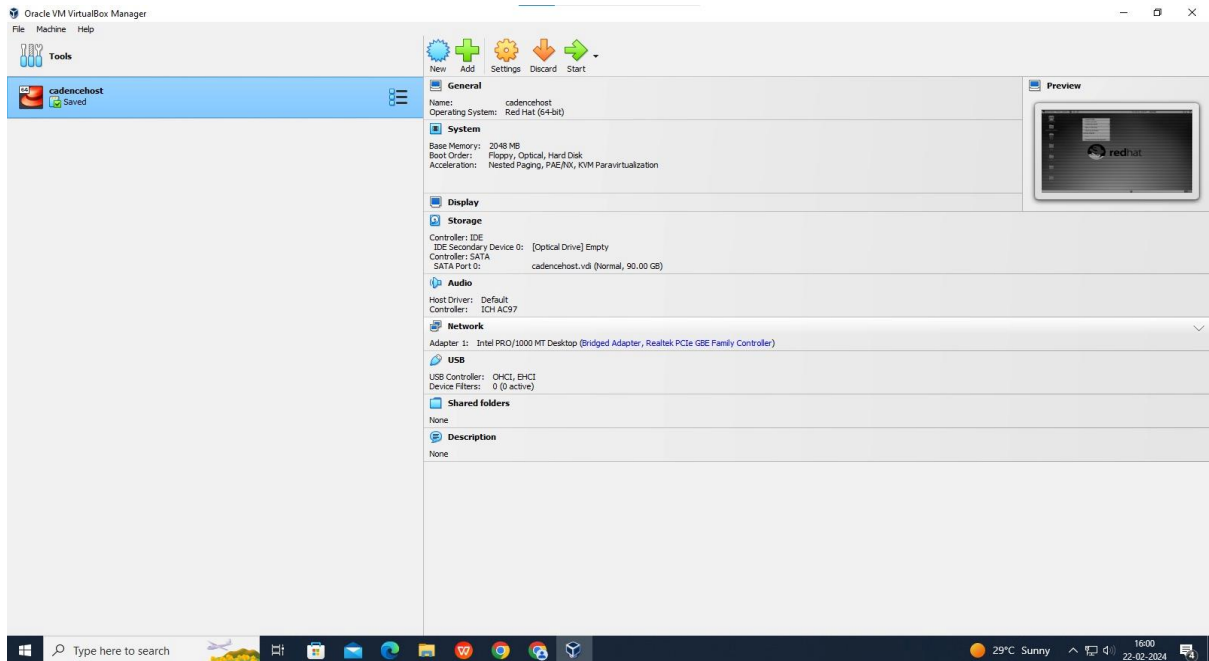


## SCHEMATIC AND TRANSIENT ANALYSIS OF A FIRST ORDER RC IN CADENCE

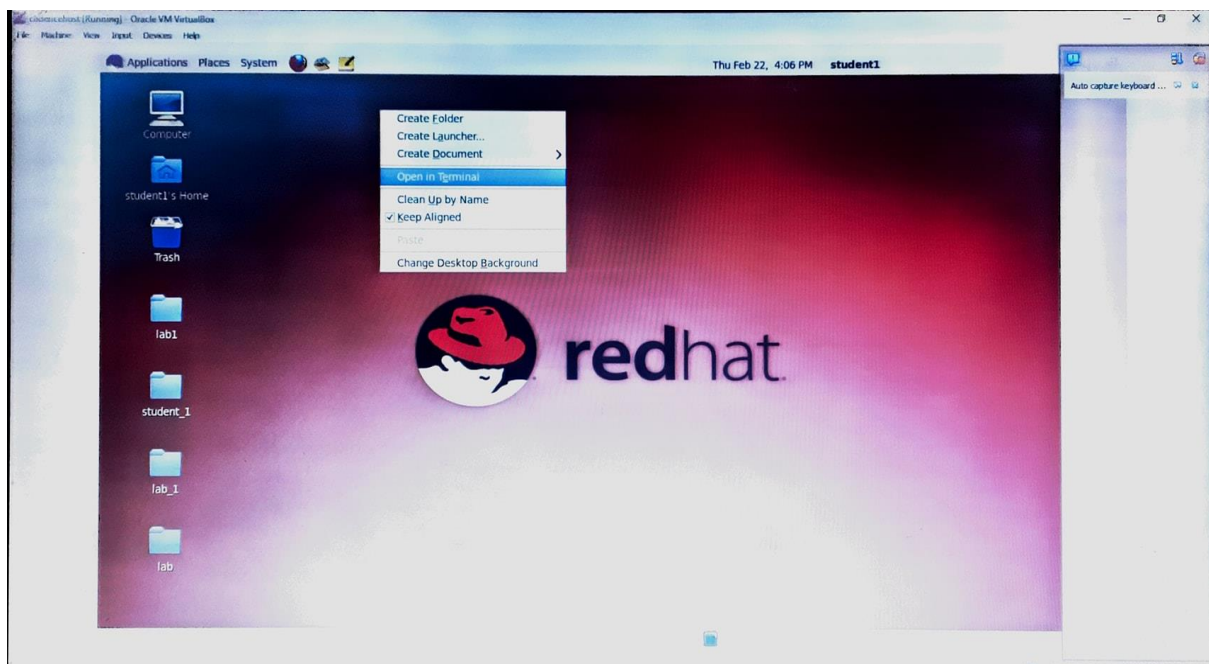
### STEPS:

1)Open oracle VM virtual box

2)Click on start



3)Right click on workspace, select **open in terminal**



4)Type the commands

**mkdir <any name>**

**(ENTER)**

**cd** <any name> (ENTER)

**pwd** (ENTER)

**source /usr/software/gpdk090** (ENTER)

**virtuoso &** (ENTER)

#### EXPLANATION:

mkdir: This command is used to create a new directory (folder) within the current directory.

cd: Short for "**change directory**," this command is used to navigate between directories. For example, cd folder\_name would move you into the directory named "folder\_name."

pwd: Short for "**print working directory**," this command shows you the full path of the current directory you are in.

virtuoso: Virtuoso is a widely-used tool within Cadence for electronic design automation (EDA). It's primarily used for designing and simulating integrated circuits (ICs) and electronic systems. It includes various modules for schematic capture, layout editing, simulation, and more.

5)virtuso tab appears

6)In virtuoso tab

- File>New>Library>mylib(give any name)>select Attach library to technology>Ok
- Select **gpdk090>Ok**

Again in Virtuoso tab

- Tools>Library Manager>mylib

7)In mylib

- File>New>cell view
- Enter cell view: **firstorderRC**
- Select OK

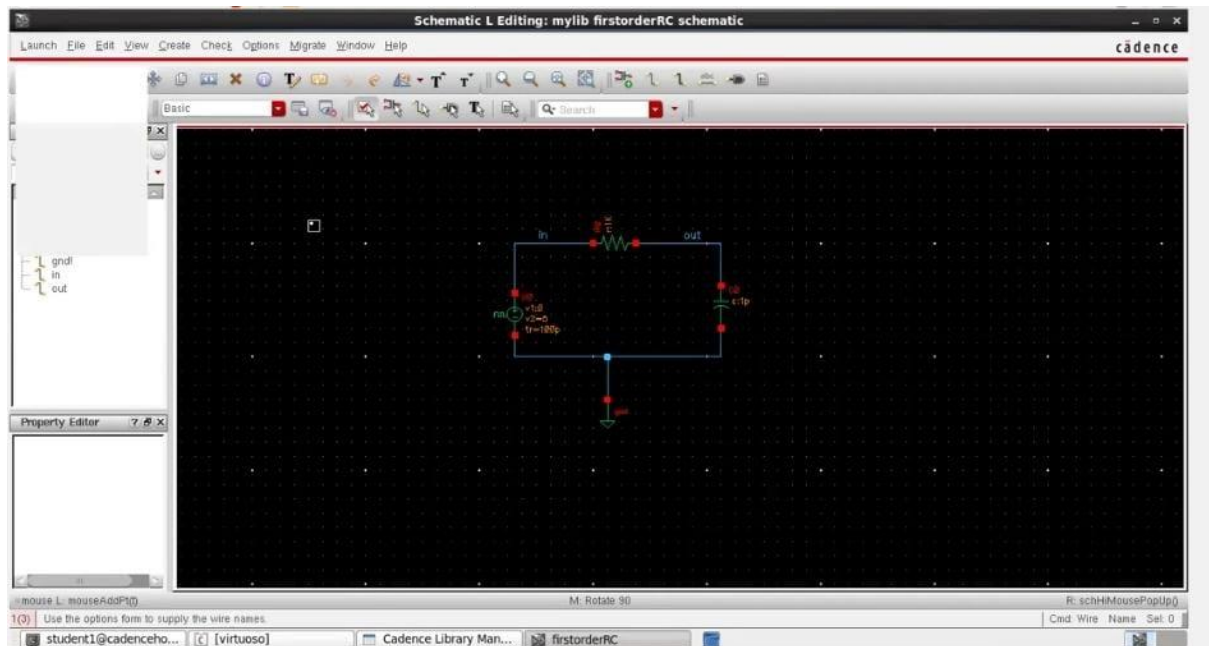
8)Create>Instance(shortcut-press "I")

- Select the following and place it on the schematic Editing window each time.

Library	Cell view	Value
analogLib	res	1kohm
analogLib	cap	1pF
analogLib	vpulse	1V
analogLib	gnd	-

9)Set up the connections as shown

Press “W” for wire to connect the circuit



10)create>wire name>in out

11)Launch>ADE L

Analyses >choose> Trans>stop:40n

12)Again in ADE L

Output>**To be plotted**>select on simulation>click in out in schematic window

**Run**



13) In the same tab > Tools > calculator > select **delay** > signal1: vt (click on **in** in schematic) > change in signal2 from **in** to **out** > Save in schematic

14) In ADE L window choose the **S** and delete it > double click on **RVAL** and give as 1K > Tools > **Parametric analysis** > variables: change to RVAL > values from: 1K to: 5K > step mode: **Linear** > total steps: 5 > Run

