

Audit Course Session 11

AUDIT COURSE ELECTRONIC CIRCUITS 2: SIMULATION BASED STUDY

Kindly update your name and roll no, once this document is shared with you

Time slot to complete your work is **40 MINUTES**

Date: 23/2/2021

Kindly upload your schematic & waveform images here, every 10 minutes, indicating your progress and intention to completion of WORK within time slot allotted

Time slot allotted to you all for the completion of Session 11 is 40 MINUTES

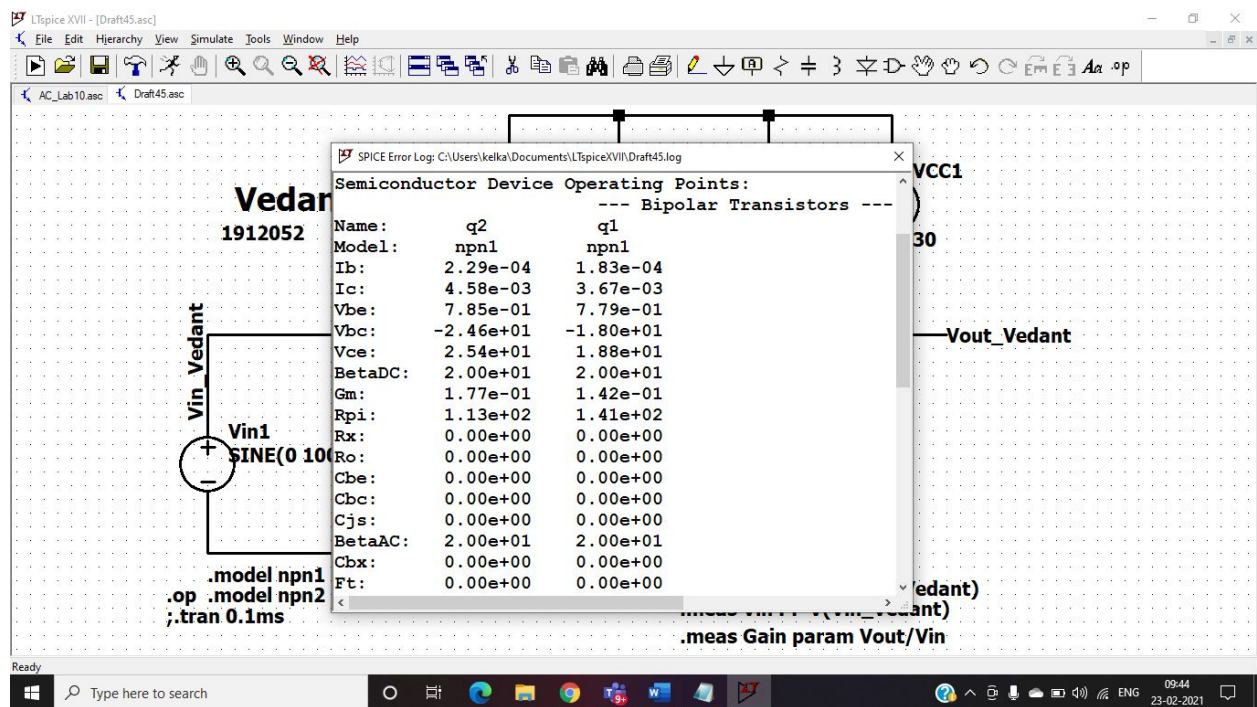
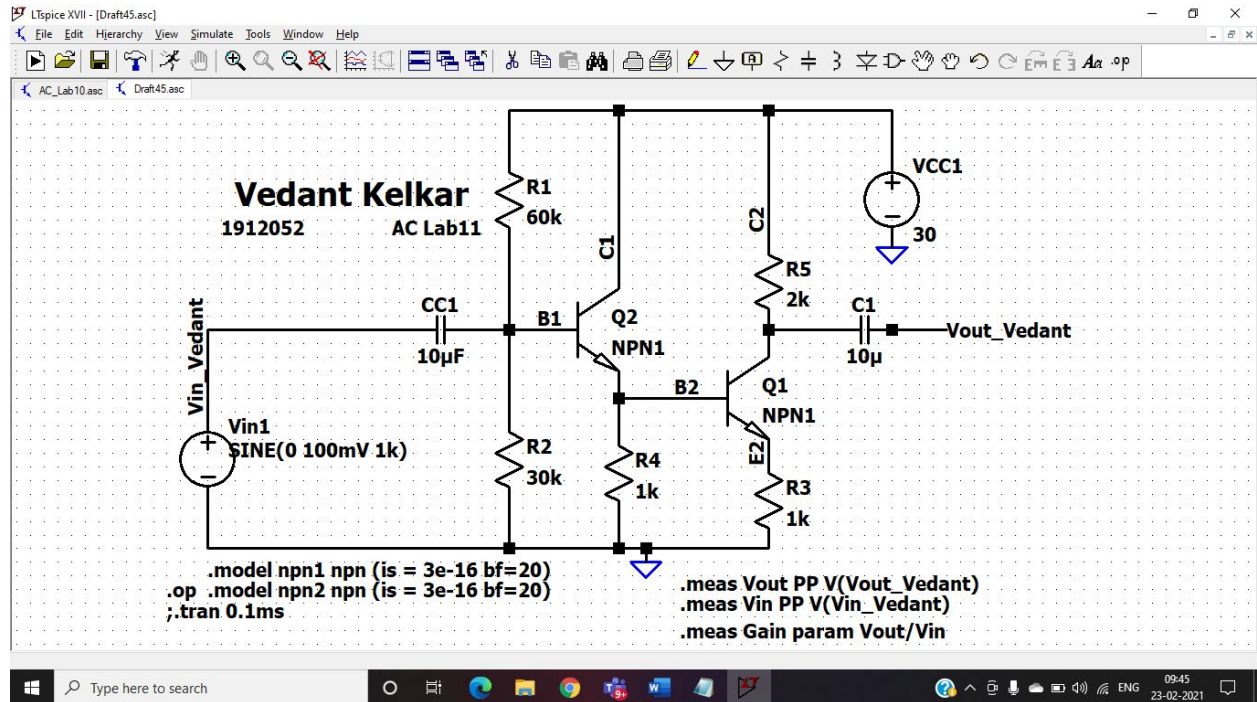
Kindly upload your work (only circuit schematic & waveform in LTSpice) in the shared google doc between this time slot only.

Follow these instruction strictly:

- 1, Start sharp ON TIME, by posting your name and roll no and **screenshot of your LT spice work screen (time and date MUST BE VISIBLE)**
2. Upload your work every 10 minutes, i.e LT spice work screen
3. This means you will upload LT spice work screen 4 times during this time slot.
4. Point 3 indicates your readiness and presences for completion of Session 11

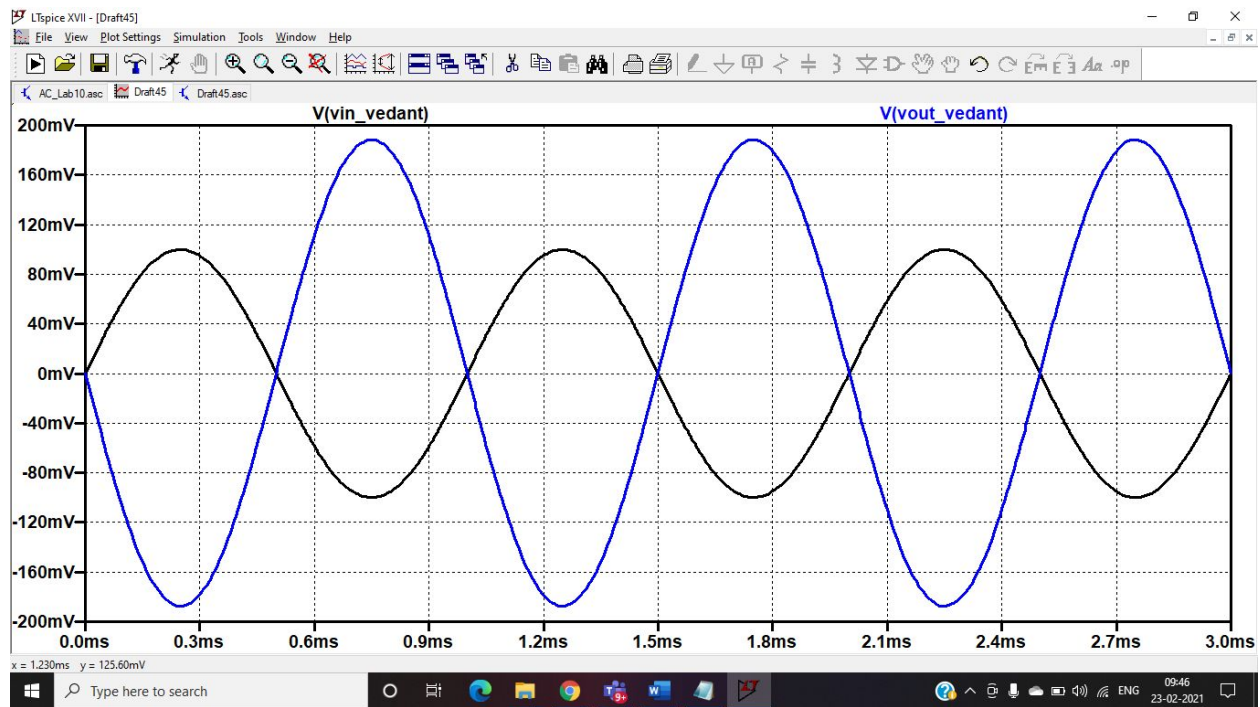
You are entitled for 10 points per session only if you follow above instruction to the details

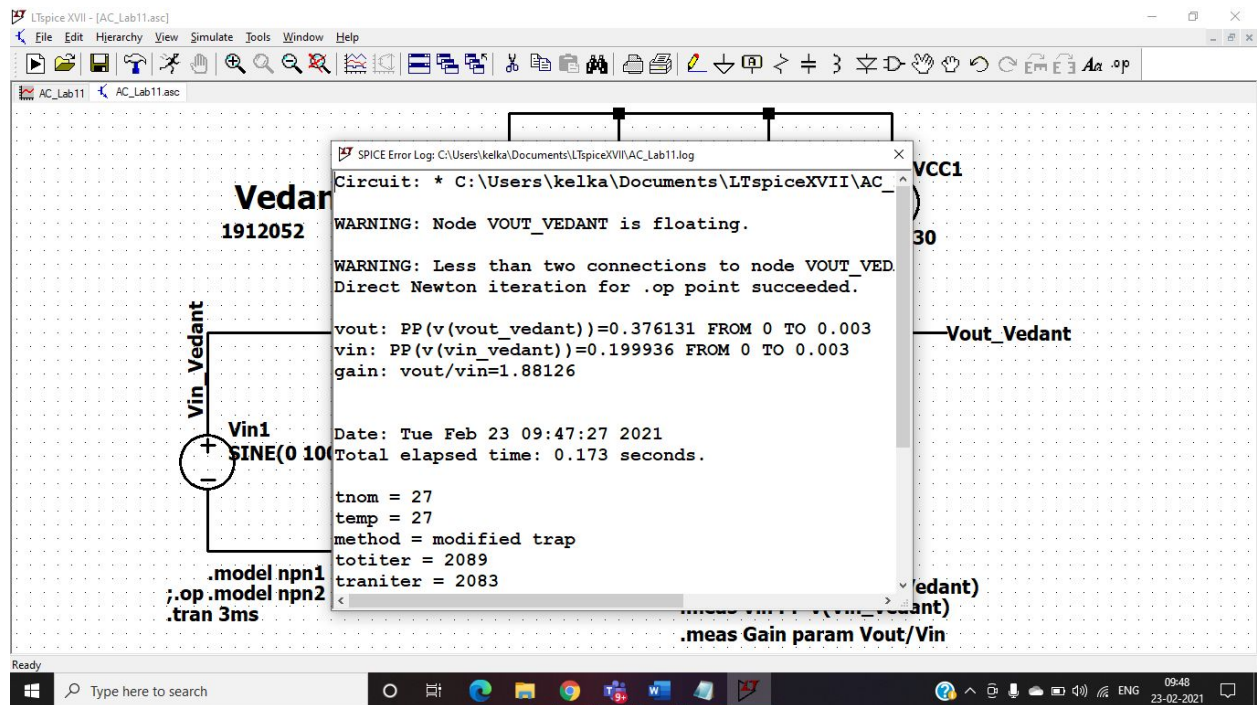
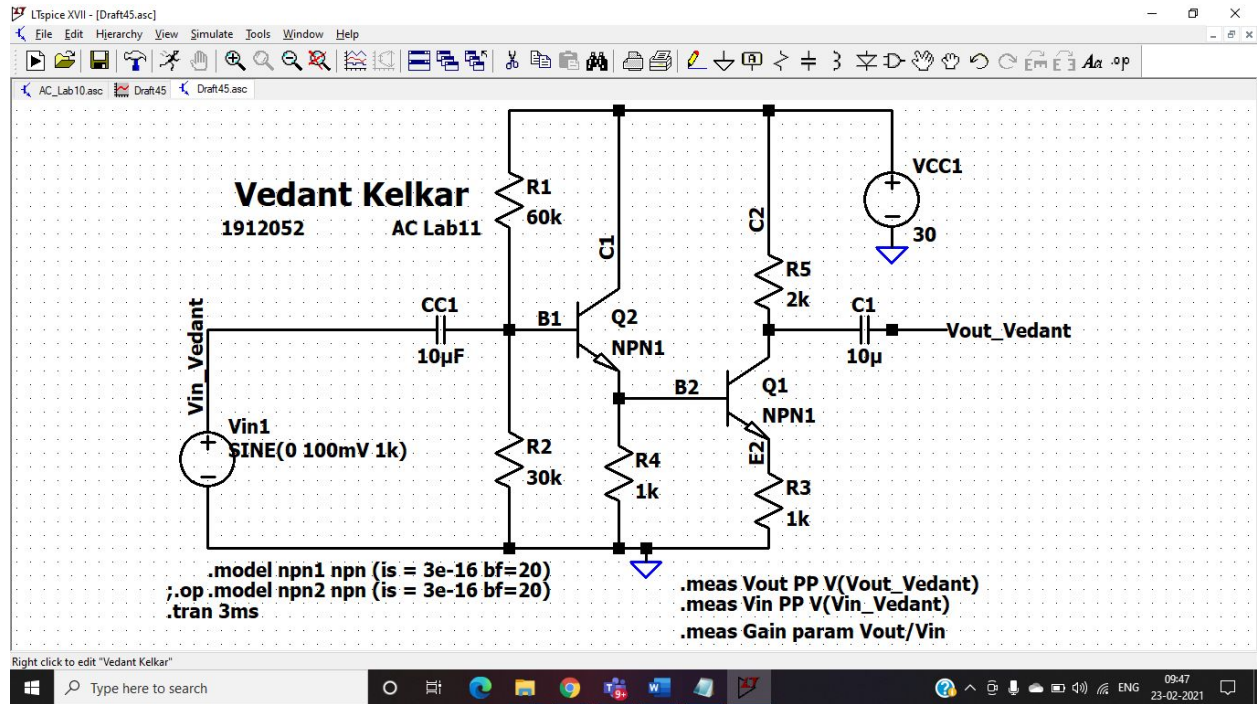
STUDENTS WORK AREA STARTS HERE



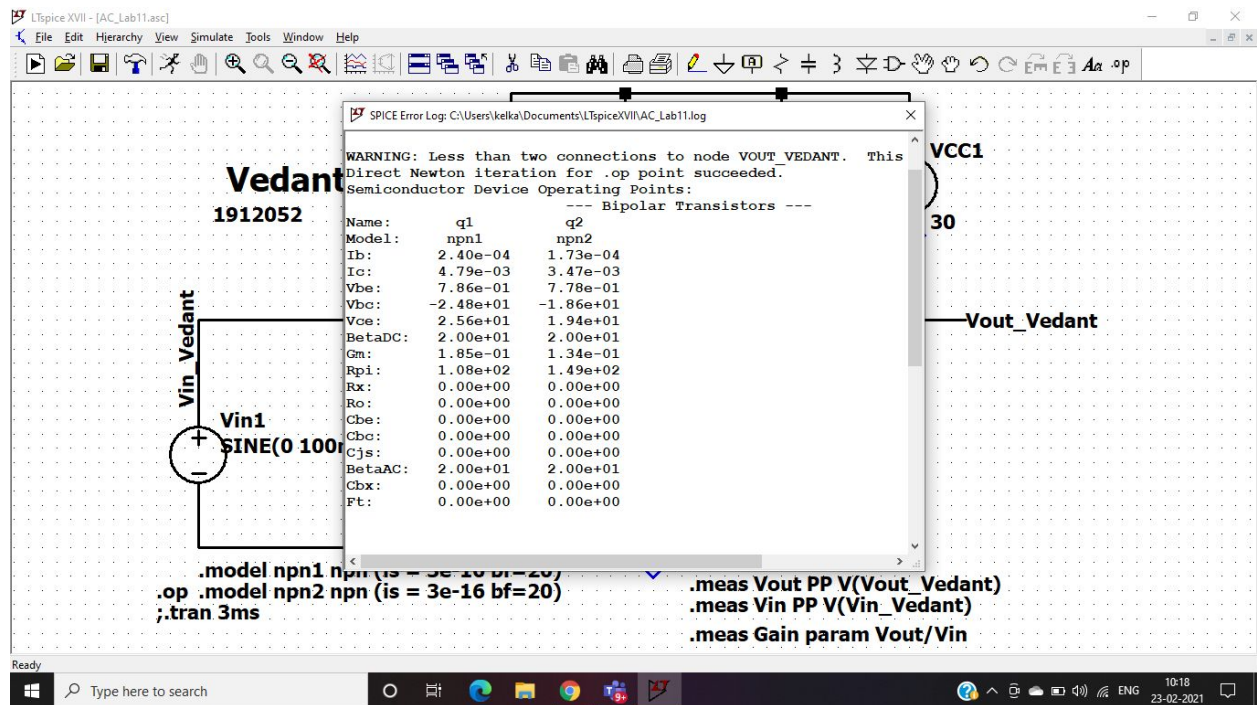
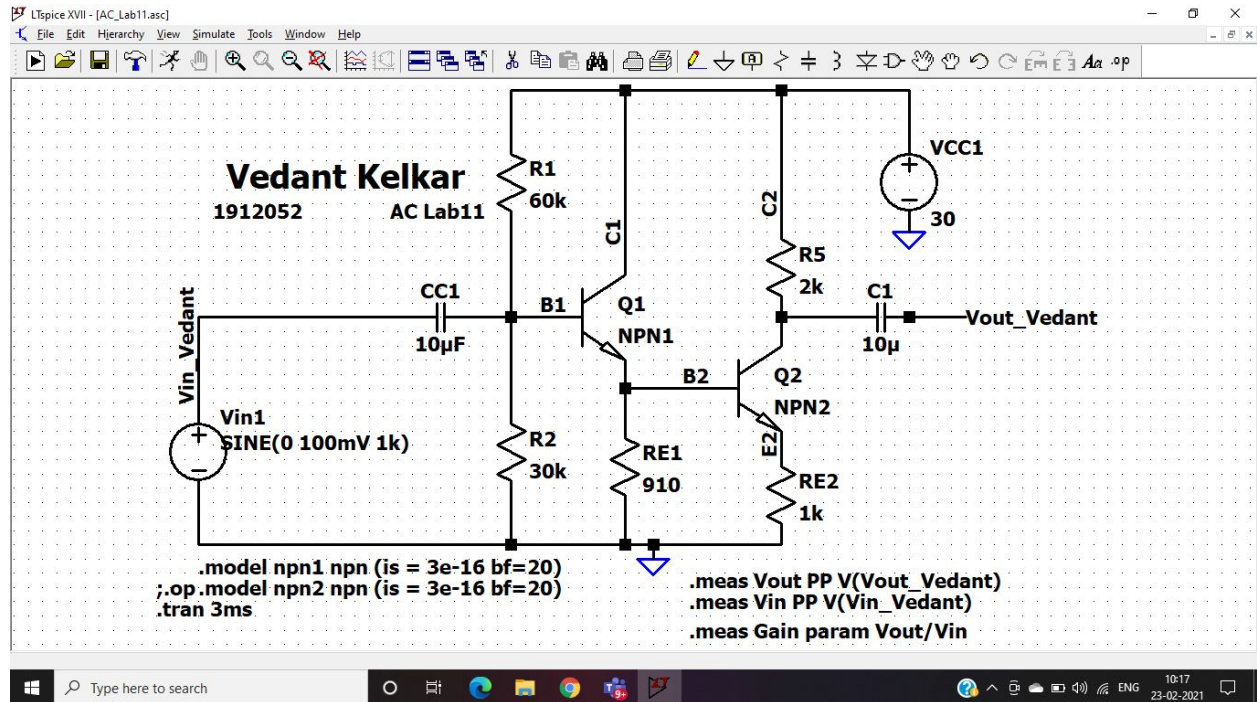
Name: q2 q1
 Model: npn1 npn1
 Ib: 2.29e-04 1.83e-04
 Ic: 4.58e-03 3.67e-03
 Vbe: 7.85e-01 7.79e-01
 Vbc: -2.46e+01 -1.80e+01

Vce: 2.54e+01 1.88e+01
 BetaDC: 2.00e+01 2.00e+01
 Gm: 1.77e-01 1.42e-01
 Rpi: 1.13e+02 1.41e+02
 Rx: 0.00e+00 0.00e+00
 Ro: 0.00e+00 0.00e+00
 Cbe: 0.00e+00 0.00e+00
 Cbc: 0.00e+00 0.00e+00
 Cjs: 0.00e+00 0.00e+00
 BetaAC: 2.00e+01 2.00e+01
 Cbx: 0.00e+00 0.00e+00
 Ft: 0.00e+00 0.00e+00





EX-1 RE1=910



Name: q1 q2

Model: npn1 npn2

Ib: 2.40e-04 1.73e-04

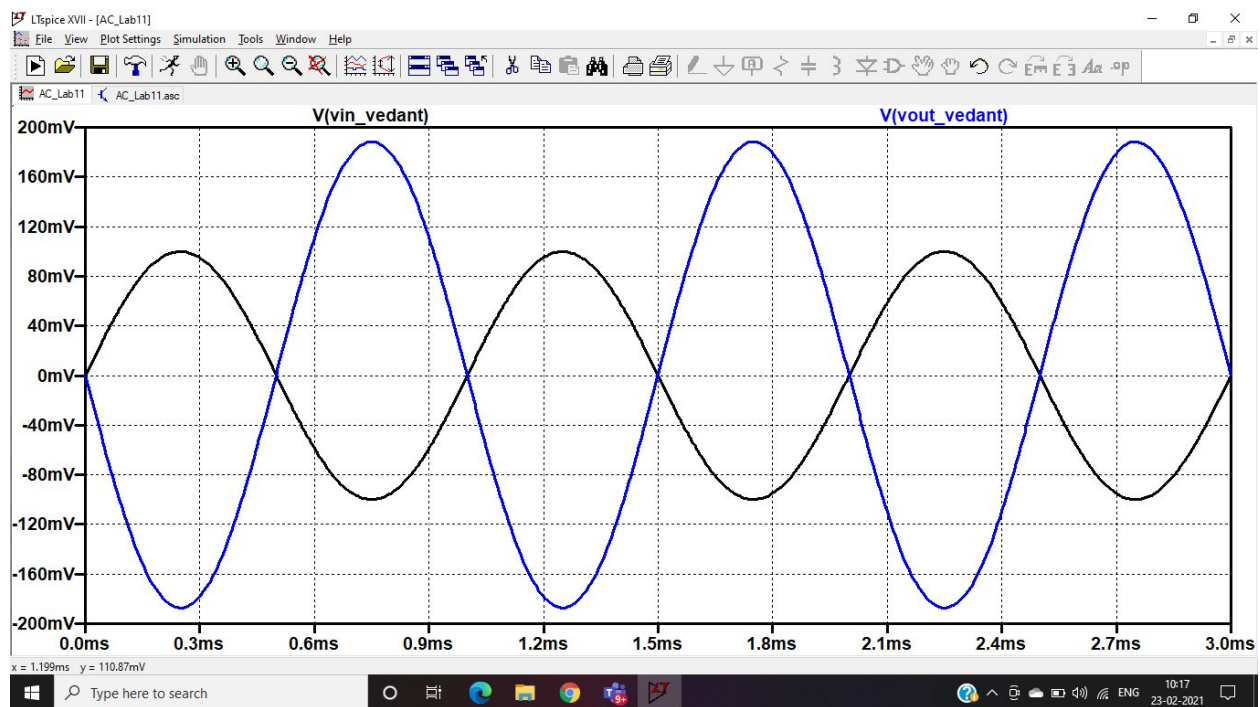
Ic: 4.79e-03 3.47e-03

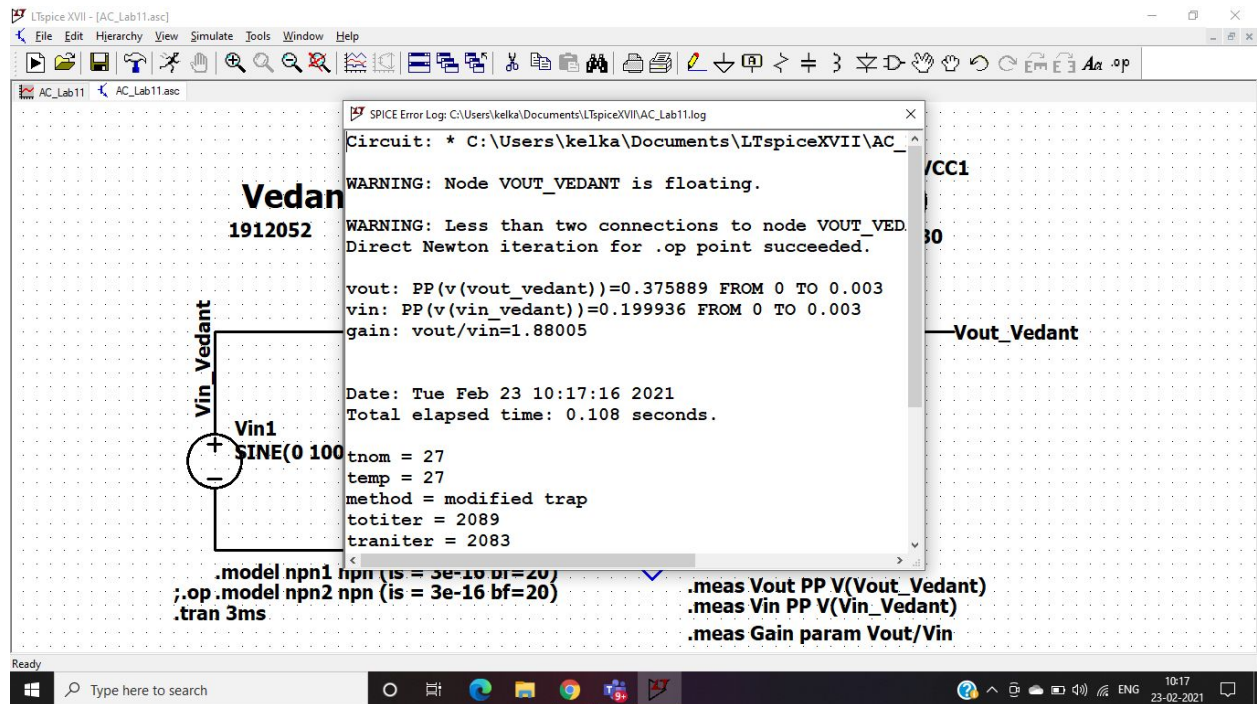
Vbe: 7.86e-01 7.78e-01

Vbc: -2.48e+01 -1.86e+01

Vce: 2.56e+01 1.94e+01

BetaDC: 2.00e+01 2.00e+01
 Gm: 1.85e-01 1.34e-01
 Rpi: 1.08e+02 1.49e+02
 Rx: 0.00e+00 0.00e+00
 Ro: 0.00e+00 0.00e+00
 Cbe: 0.00e+00 0.00e+00
 Cbc: 0.00e+00 0.00e+00
 Cjs: 0.00e+00 0.00e+00
 BetaAC: 2.00e+01 2.00e+01
 Cbx: 0.00e+00 0.00e+00
 Ft: 0.00e+00 0.00e+00





Parameters that changed

	RE1=1k	RE1=910
Gain	1.88126	1.88005
Vout(p-p)	0.376131	0.375889

DC parameters that changes

	RE1=910	RE1=1k
Ib(q2)	2.01e-04	1.73e-04
Ic(q2)	4.02e-03	3.47e-03
Vbe(q2)	7.82e-01	7.78e-01
Vbc(q2)	-1.73e+01	-1.86e+01
Vce(q2)	1.81e+01	1.94e+01
Gm(q2)	1.55e-01	1.34e-01
Rpi (q2)	1.29e+02	1.49e+02

IB and IC in NPN1 increases whereas IB and IC of NPN2 decreases. Vout decreased slightly and Gain also decreased slightly.

Suggestions: Add inference's for exercise

AC LAB 11 is approved with suggestions: Inderjit Singh Dhanjal