P01 report

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Chapter 1

Theoretical part

1.1 Circuit calculation

Theoretical calculation of the circuit V1=1.7V $R1 = 2\Omega$ R2=8ohm
$VR = (R \times VT)/RT$
$VR1 = (R1 \times V1)/RT =$ V
$VR2 = (R2 \times V2)/RT =$ V

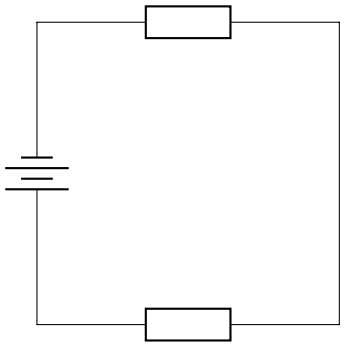
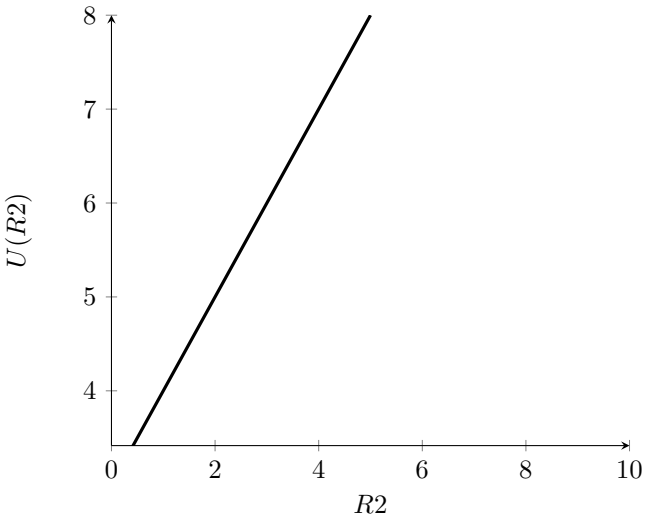


Figure 1.1: Electrical circuit diagram

V1	V
R1	ohm
R2	ohm
UR1	V
UR2	V


8
7
6
5
4
$U(R2)$
0
2
4
6
8
10
$R2$

Chapter 2

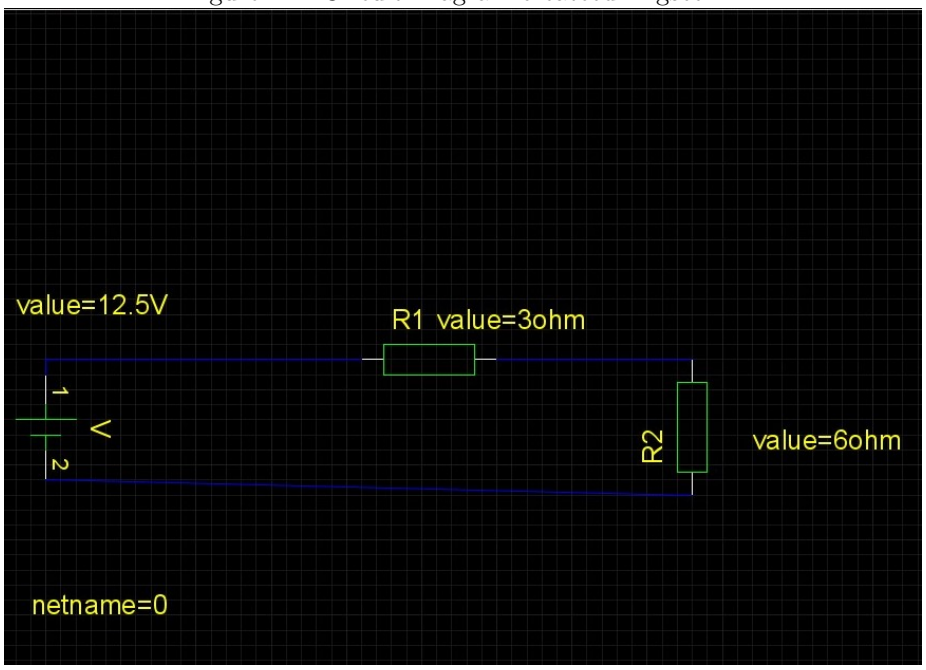
Practical part

Practical Calculation

2.1 Work with GEDA programs'

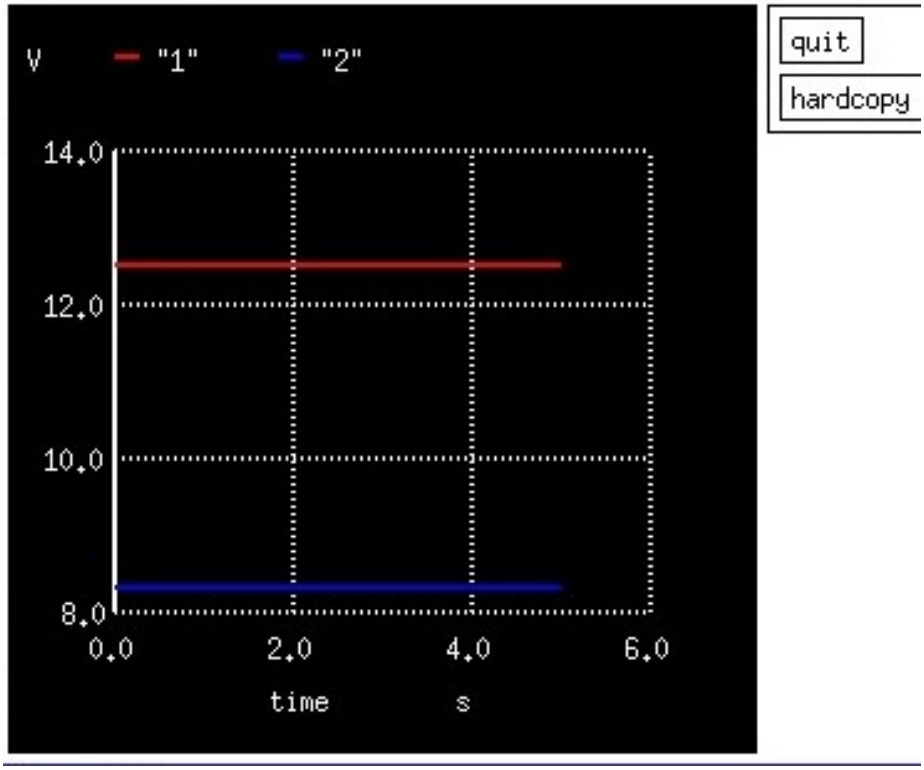
2.1.1 'Work with gschem'

Figure 2.1: Circuit Diagram createed in gscehm



2.1.2 'Work with gnetlist'

Figure 2.2: The plotted graph after using ngspice



2.2 Work with QUCS programs'

Image of Schematics
    DC simulation
    Curve and Table obtained from DC Simulation

Figure 2.3: Circuit Diagram in QUCS

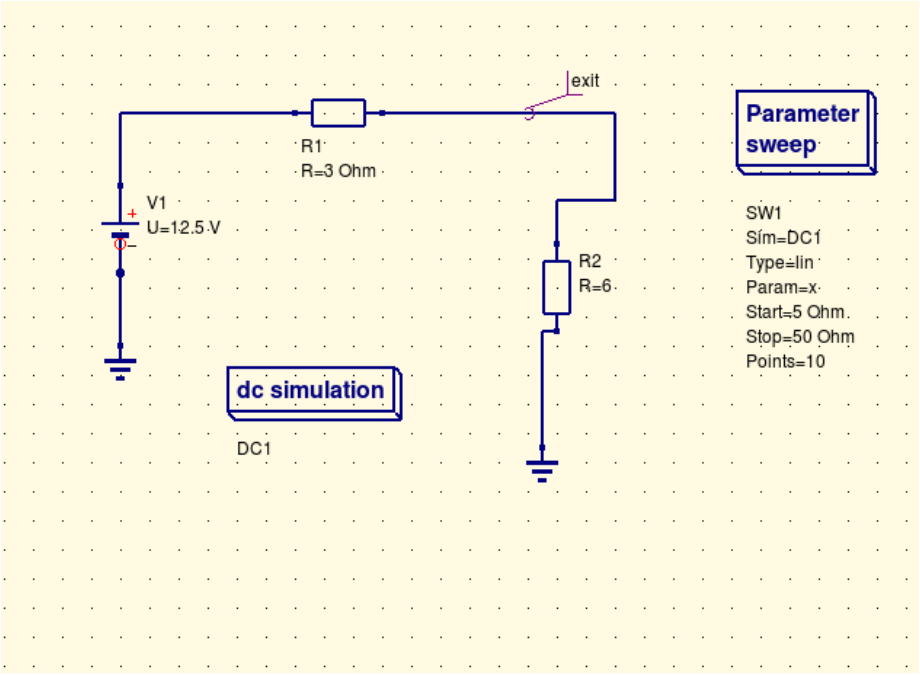


Figure 2.4: DC Simulation

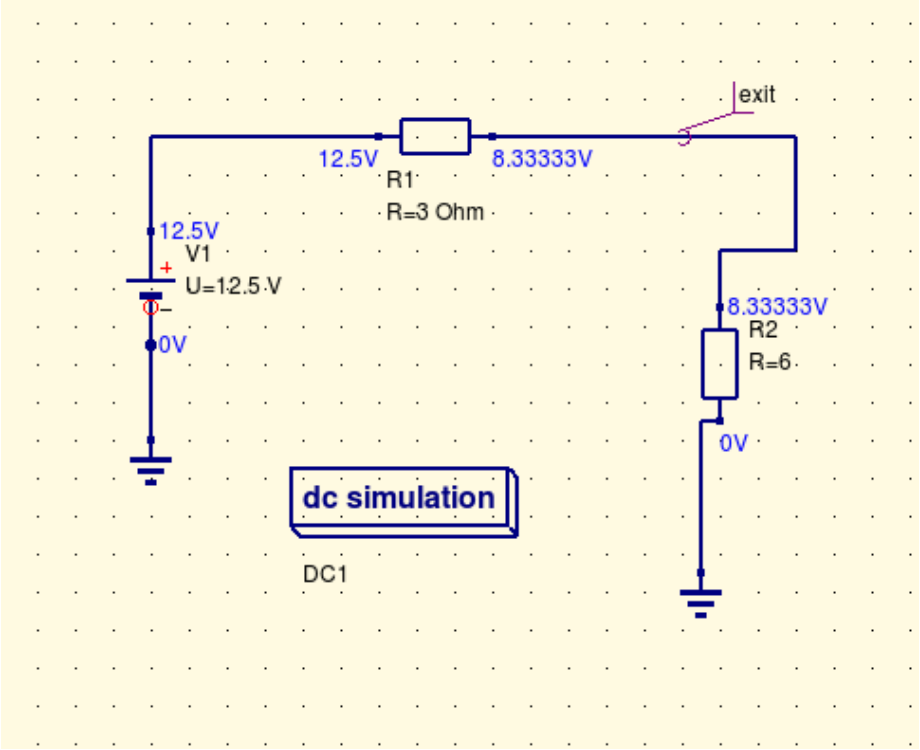
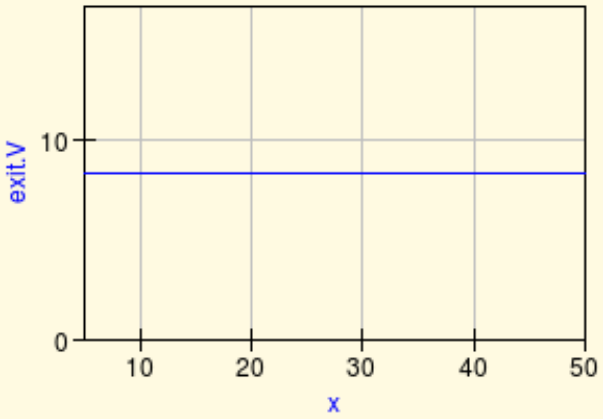
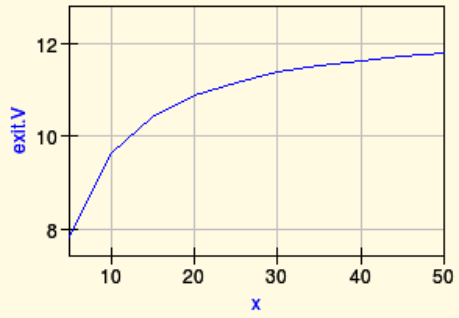


Figure 2.5: The following graph shows the DC simulation for the various obtained values



x	V1.I	x
5	-1.39	
10	-1.39	
15	-1.39	
20	-1.39	
25	-1.39	
30	-1.39	
35	-1.39	
40	-1.39	
45	-1.39	
50	-1.39	

Figure 2.6: The following graph shows the Sweep Simulation for the various obtained values



Equation

UR2=f(R2)

x	V1.I
5	-1.56
10	-0.962
15	-0.694
20	-0.543
25	-0.446
30	-0.379
35	-0.329
40	-0.291
45	-0.26
50	-0.236