

DC sweep analysis in NGspice

Talk to a Teacher

<http://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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Learning Objectives

In this tutorial we will learn,

- **To perform,**



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In this tutorial we will learn,

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 - **DC sweep analysis**



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In this tutorial we will learn,

- To perform,
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 - **Nested DC sweep analysis**



Prerequisite

- **Basic knowledge of electronic circuits**



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- **Basic knowledge of electronic circuits**
- **Basic knowledge of linux shell commands**



Software requirement

- **OS: Ubuntu 12.04**

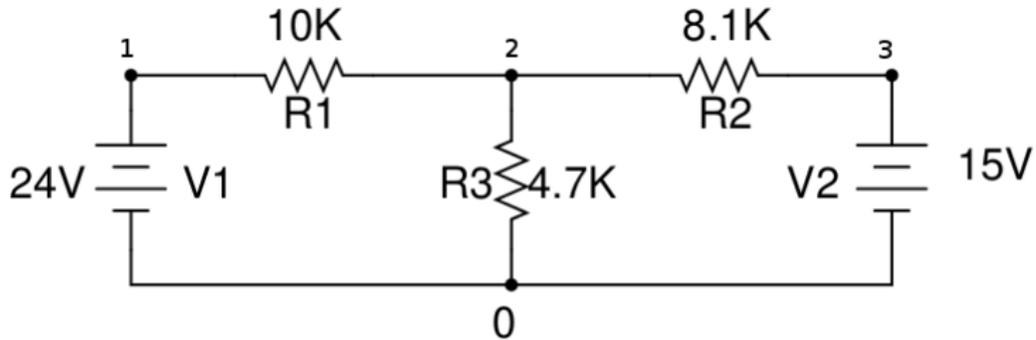


Software requirement

- OS: Ubuntu 12.04
- **NGspice version: 23**



Example circuit



General form to use DC command

.DC SRCNAM VSTART VSTOP VINCR

- **SRCNAM: Name of independent Voltage/Current source**



General form to use DC command

.DC SRCNAM VSTART VSTOP VINCR

- **SRCNAM:** Name of independent Voltage/Current source
- **VSTART:** Starting value



General form to use DC command

.DC SRCNAM VSTART VSTOP VINCR

- **SRCNAM:** Name of independent Voltage/Current source
- **VSTART:** Starting value
- **VSTOP:** Final value



General form to use DC command

.DC SRCNAM VSTART VSTOP VINCR

- **SRCNAM:** Name of independent Voltage/Current source
- **VSTART:** Starting value
- **VSTOP:** Final value
- **VINCR:** Increment value



General form for nested DC sweep

```
.DC SRCNAM VSTART VSTOP VINCR  
SRC2 START2 STOP2 INCR2
```

where,

- **SRCNAM: Primary sweep variable**



General form for nested DC sweep

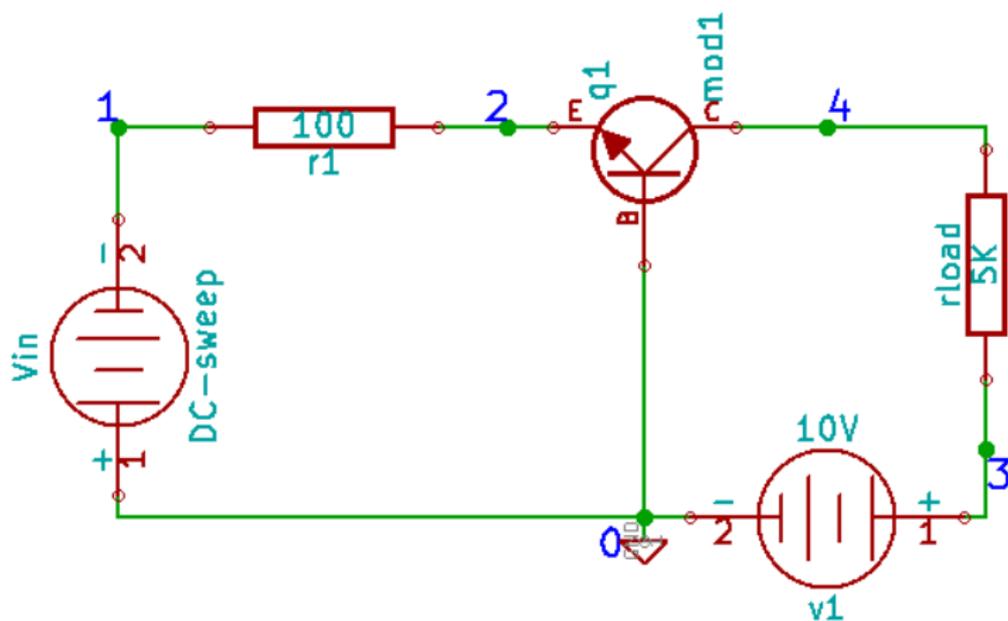
```
.DC SRCNAM VSTART VSTOP VINCR  
SRC2 START2 STOP2 INCR2
```

where,

- SRCNAM: Primary sweep variable
- SRC2: Secondary sweep variable



Example circuit



Summary

In this tutorial we learnt,

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- More information on this Mission is available at

<http://spoken-tutorial.org/NMEICT-Intro>

