

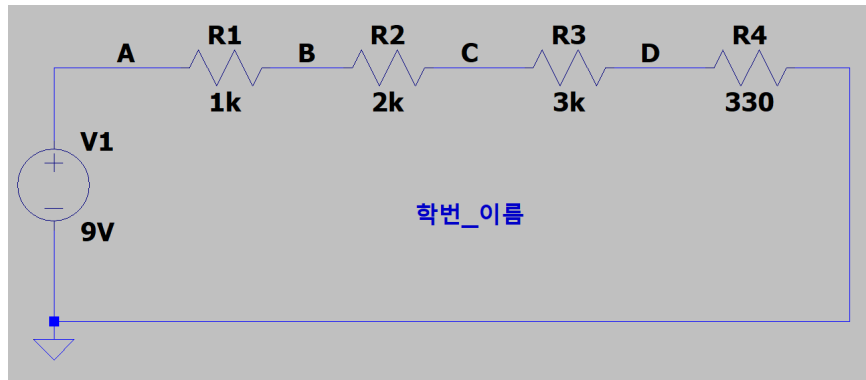
## Lab04: 직렬, 병렬, 직렬-병렬 회로

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이름: 곽도현

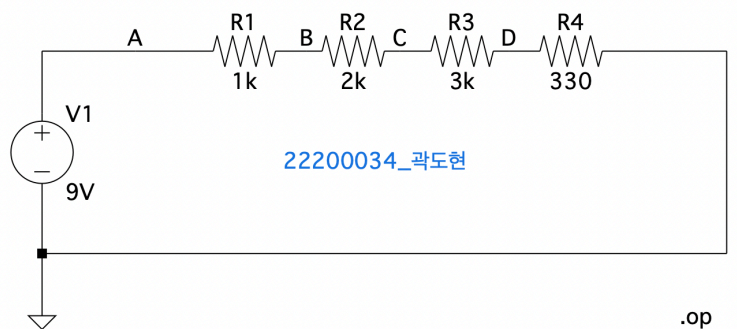
1. LTspice를 사용하여 아래와 같이 회로를 구성하고, DC simulation을 수행하여 스크린 capture하여 제출하시오 (1.5점)

(1) 회로 capture (0.5점)



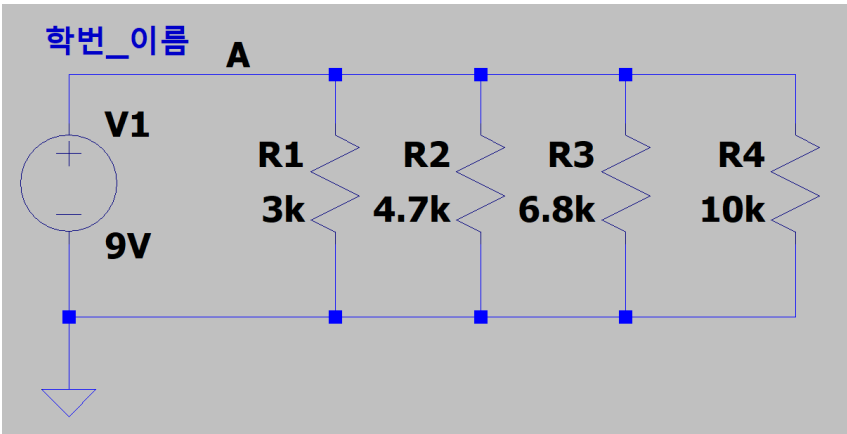
(2) DC simulation 결과 capture (1점)

```
LTspice 17.2.2 for MacOS
Circuit: *
Start Time: Sun Mar 24 13:38:34 2024
solver = Normal
Maximum thread count: 4
tnom = 27
temp = 27
method = modified trap
CompressWinPoints = 1024
Direct Newton iteration for .op point succeeded.
Operating Bias Point Solution:
V(a)          9      voltage
V(b)         7.5782   voltage
V(c)         4.7346   voltage
V(d)         0.469194 voltage
I(R1)        0.0014218 device_current
I(R2)        0.0014218 device_current
I(R3)        0.0014218 device_current
I(R4)        0.0014218 device_current
I(V1)       -0.0014218 device_current
Total elapsed time: 0.006 seconds.
```



2. LTspice를 사용하여 아래와 같이 회로를 구성하고, DC simulation을 수행하여 스크린 capture하여 제출하시오 (1.5점)

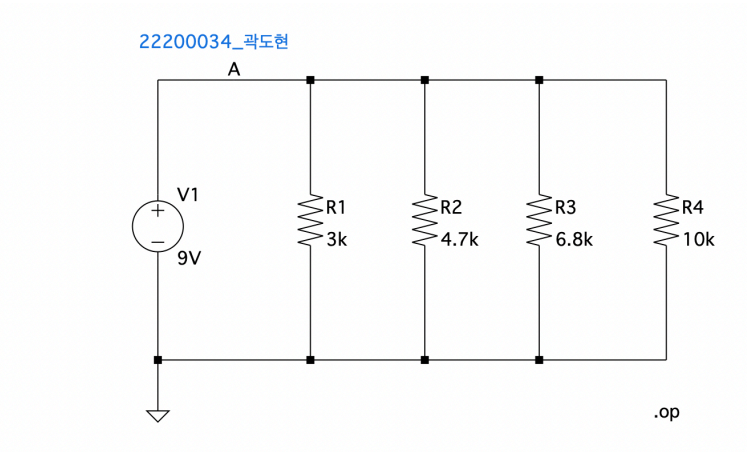
(1) 회로 capture (0.5점)



(2) DC simulation 결과 capture (1점)

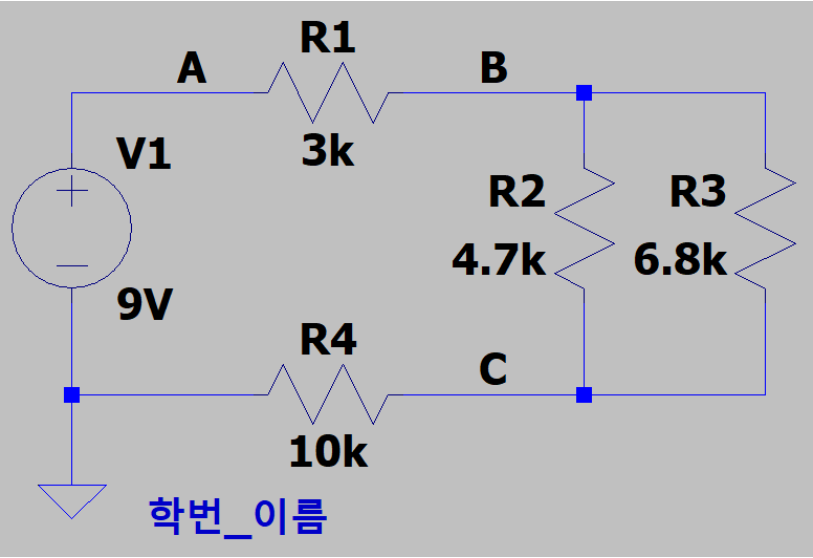
```
LTspice 17.2.2 for MacOS
Circuit: *
Start Time: Sun Mar 24 13:58:08 2024
solver = Normal
Maximum thread count: 4
tnom = 27
temp = 27
method = modified trap
CompressWinPoints = 1024
Direct Newton iteration for .op point succeeded.
Operating Bias Point Solution:
V(a)          9      voltage
I(R1)         0.003   device_current
I(R2)         0.00191489 device_current
I(R3)         0.00132353 device_current
I(R4)         0.0009   device_current
I(V1)        -0.00713842 device_current

Total elapsed time: 0.005 seconds.
```



3. LTspice를 사용하여 아래와 같이 회로를 구성하고, DC simulation을 수행하여 스크린 capture하여 제출하시오 (2점)

(1) 회로 capture (1점)



(2) DC simulation 결과 capture (1점)

```
LTspice 17.2.2 for MacOS
Circuit: *
Start Time: Sun Mar 24 14:13:35 2024
solver = Normal
Maximum thread count: 4
tnom = 27
temp = 27
method = modified trap
CompressWinPoints = 1024
Direct Newton iteration for .op point succeeded.
Operating Bias Point Solution:
V(a)          9      voltage
V(b)          7.28888 voltage
V(c)          5.70374 voltage
I(R2)          0.000337264 device_current
I(R3)          0.000233109 device_current
I(R1)         -0.000570374 device_current
I(R4)          0.000570374 device_current
I(V1)         -0.000570374 device_current
Total elapsed time: 0.006 seconds.
```

