

# North South University ECE

Experiment No: 6&7

Experiment Title: Build a single cycle data path

Course Code: CSE332L

Course Name: Computer Organization & Architecture Lab

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Objective:

- Design data path for R type and I type operation in 16 bit ISA

Apparatus:

## Logisim Tool

ISA structure:

### R-type

op (4 bit)	rs (4 bit)	rt (4 bit)	rd (4 bit)
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I-type

op (4 bit)	rs (4 bit)	rt (4 bit)	immediate (4 bit)
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Circuit diagram:

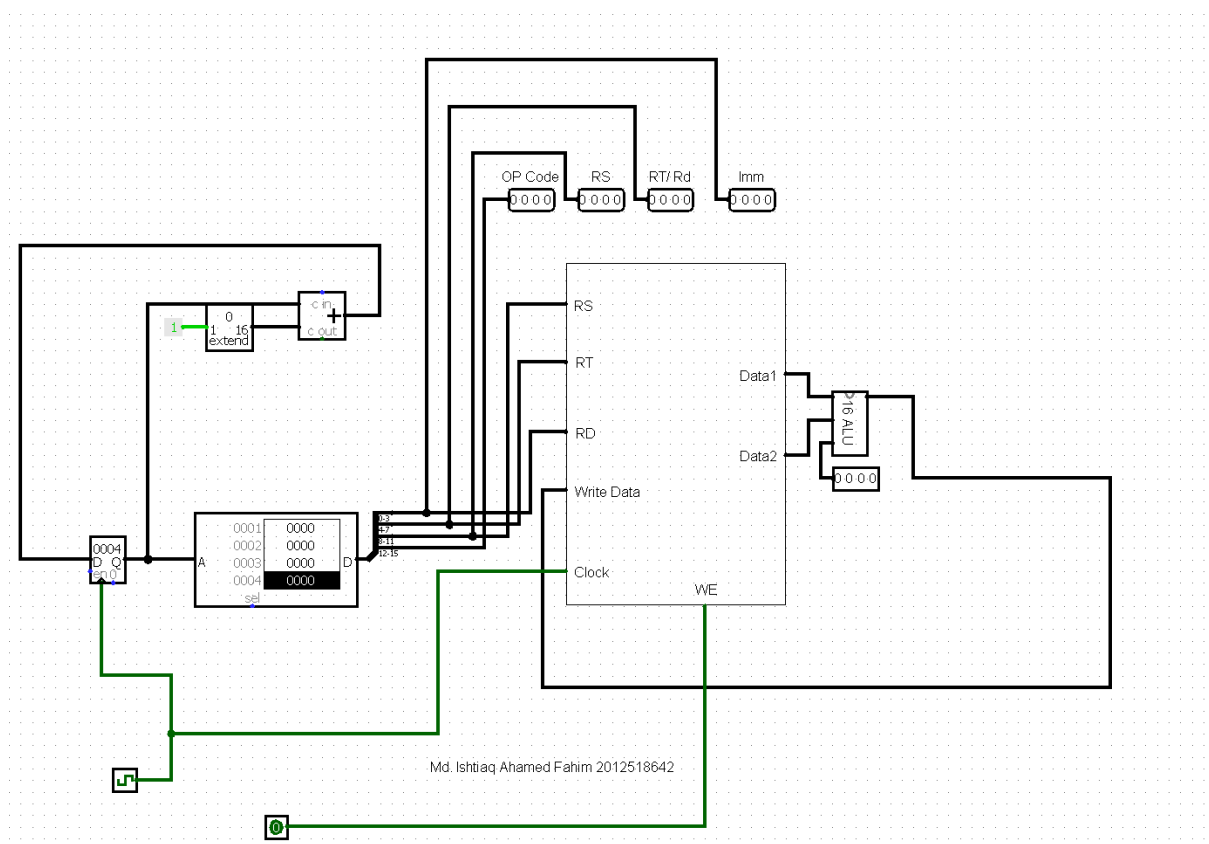


Fig-1: R type ISA instruction

