

North South University

Department of Electrical & Computer Engineering

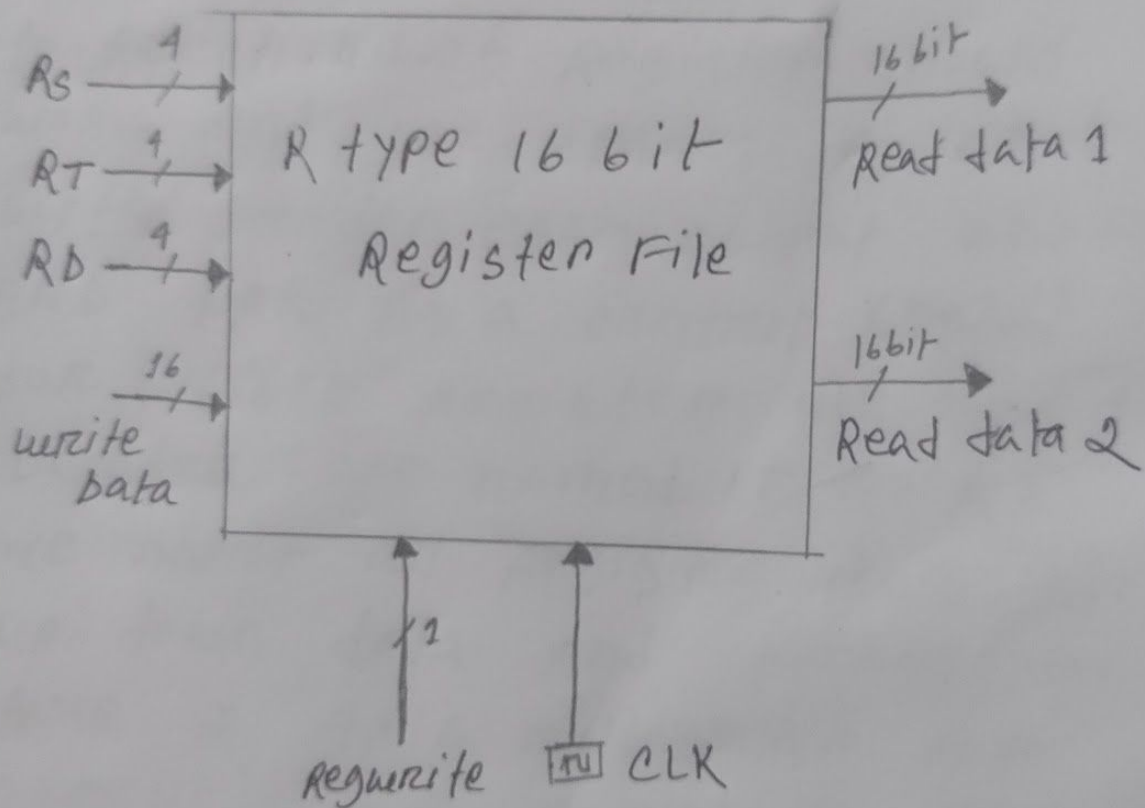
Lab Report

Experiment No:	04
Experiment Title:	Design of a Register File(16 Bit)
Course Code:	CSE332L
Course Name:	Computer Organization & Architecture Lab
Name & ID:	Monjur Hasan,1821591642
Date of Experiment:	1/12/2020
Date of Submission:	1/12/2020

Experiment name: 16 bit Register File.

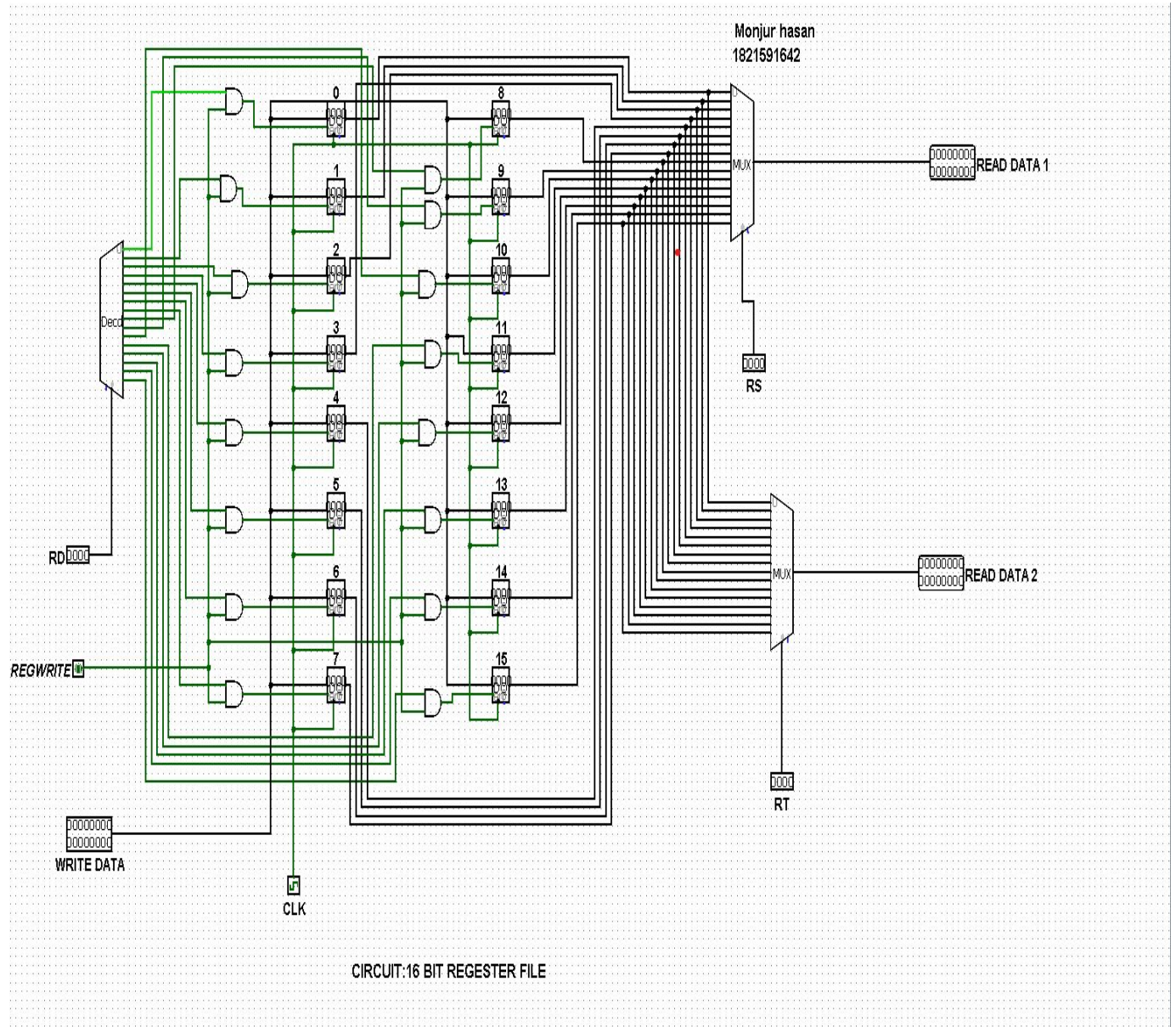
Equipment list: ① logisim tools.

Block Diagram:-



Block diagram:- 16 bit Register File.

Circuit Diagram:



~~Disse~~

Discussion:- By doing this lab now we can built 16-bit register file. we built a circuit in the logisim. Firstly we take 16 bit input to write in register. And we use a decoder to select which register should work. And we connect a input with decoder each output and doing AND ~~FOR~~ AS a control signal. for 16 bit register we need 4x16 decoder. we named it as 'RD'. we short all register clock for up down data. And Finally we take 2 4x16 multiplexer for output And named the mux as 'RS' And 'RT'. And then I connect the output of register

the mux input respectively. And
this I ~~was~~ got 2 output of
mux and that are 16 bit output.
And I named this as Read
data 1 and Read data 2. And
I check my circuit. And this
working properly. And my Ex-
periment was successful.