

ES204 Digital Systems

LAB Assignment - 8

Indian Institute of Technology, Gandhinagar
March 12, 2024

Marks : 30

Submission instructions:

Only one student from the team will submit with the word doc name Rollno1_Rollno2.pdf. The PDF will contain the code, testbench and simulation results.

1. [30 Marks]

You have designed a parallel register where all the bits are simultaneously loaded into the register. In this lab, we will make a register file (where there are several registers).

Design 32-bit register file with 8 registers. Name these registers as R0, R1, ..R7. The register file allows moving contents of one register to another. The source and destination registers are given in the testbench.

For example, MOV R0, R1 is like saying move the contents of Register-1 to Register-0.