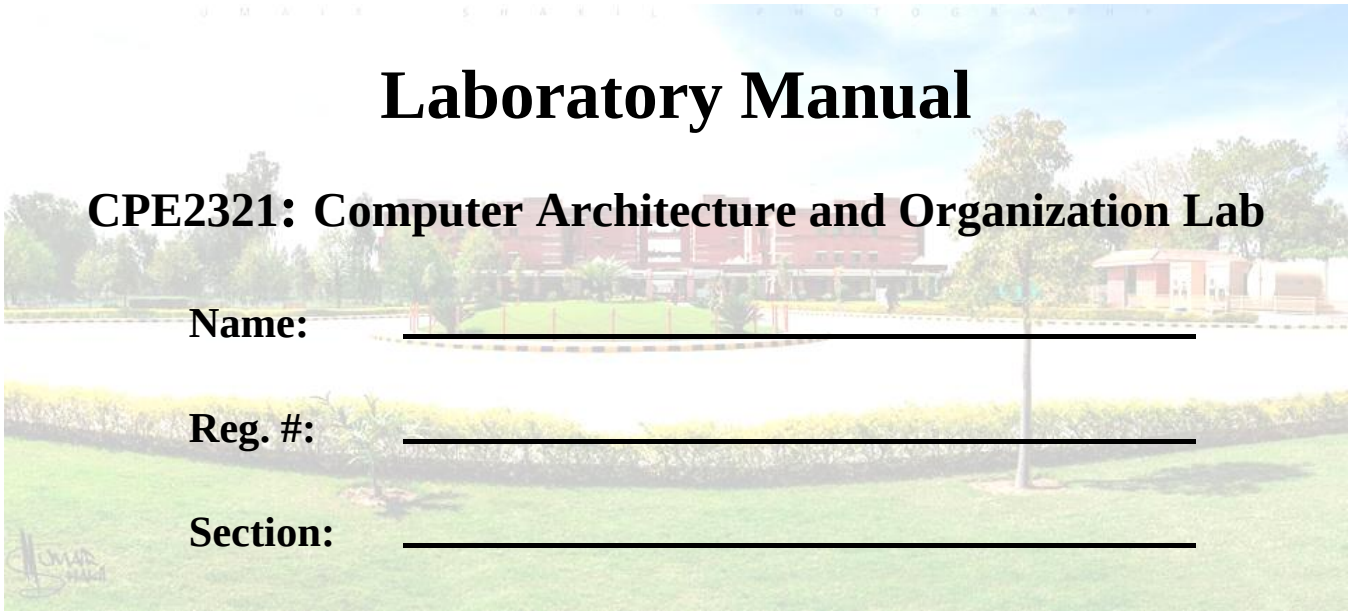


Laboratory Manual

CPE2321: Computer Architecture and Organization Lab

Name: _____

Reg. #: _____

Section: _____

Department of Electrical and Computer Engineering

Capital University of Science and Technology

Islamabad, Pakistan

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List of Experiments

1. Introduction to Computer Architecture and Software Tools
2. Implementation of Arithmetic Logic Unit (ALU) in LogiSim
3. Implementation of RAM and ROM memory blocks in LogiSim
4. RISC-V assembly programming using Data Transfer and Arithmetic Instructions
5. RISC-V assembly programming using Logic and Jump instructions
6. Implementation of RISC-V assembler
7. Design of Single Cycle Processor Data path I
8. Design of Single Cycle Processor Data path II
9. Design of Single Cycle Processor Control-path
10. Integration of data and control path and Simulation of Single Cycle Processor
11. Pipelining of single cycle processor
12. Implementation of Cache memory hierarchy
13. Lab Project I
14. Lab Project II