Computer Architecture and Organization

Project – 2

Team Members –

Harshit Vadodaria (B00817400),

Ashmeet Kaur Chhabra(B00816058),

Akash Thakur (B00814014).

Tasks Implemented –

1) Harshit Vadodaria – All Instructions, All Functional Units, Forwarding Logic, Project Structure, Fetch and Decode stages, HALT instruction implementation, dependency handling, Stalling, Register Renaming – Physical Register file with Status, Waiting, Allocated, Renamed bits, and Rename table

2) Ashmeet Kaur Chhabra – Issue Queue Construction, IQ Instruction Insertion Logic, IQ Instruction prioritizing logic, IQ Operand update (forwarded), Load Store Queue Construction, LSQ Instruction Insertion and pop, LSQ and IQ instructions validity check

3) Akash Thakur – ROB construction (Implemented Queue), Instruction enqueue, Instruction dequeue, Instruction Validity checks, Instruction operand update (forwarded)