Aurora-16 Software CPU

Team Members

Ganesh

Tushar

Jeevan

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Repository

The complete source code, documentation, schematics, example programs, assembler, emulator, and demo video are hosted at:

https://github.com/ganeshthampi/aurora-softcpu

Team Contributions

Ganesh led the architecture definition, wrote the specification for the ISA, designed the memory map, and implemented the emulator entry-points and CLI tooling.

Tushar focused on core CPU logic, implementing the ALU, status flag semantics, and the control unit that sequences fetch/compute/store cycles.

Jeevan created the assembler, directive support, label resolution logic, and authored the example programs (Hello World, Fibonacci, Timer).

Sindhura produced the documentation set (architecture, emulator, assembler, programs), the CPU schematic, the Fibonacci demo video, and compiled this report.