

## sdmay19-25: Handheld Emulation Station

Semester 2 Week 6 & Spring Break Joint Report

3/11 - 3/22

### Team Members

Jacob Nachman — *Meeting Facilitator*

Nick Lang — *Meeting Scribe*

Nic Losby — *Chief Engineer*

Sean Hinchee — *Test Engineer*

Matthew Kirpes — *Report Manager*

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### Summary of Progress this Report

Opcodes completed, besides ones that revolve around cycling structure (e.g. jumps). Debugged V4 power circuit, refined cpu infrastructure.

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### Pending Issues

Implement CPU cycling, fix some cpu refinement issues, GPIO functionality.

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### Plans for Upcoming Reporting Period

Jacob Nachman: Work with Nick to cycle the cpu and Sean to clean up the cpu's file structure.

Nic Losby: Get the power circuit 100% working. Voltage breaks down once a large enough load is applied; Not sure if a V5 is needed but maybe.

Nick Lang: Integrate the memory unit and cpu

Sean Hinchee: Continue work on the GPIO functionality in the kernel module. Refactor tests to be in line with latest batch of updates.

Matthew Kirpes: Work with others for integrating cpu and memory.

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### Past Week Accomplishment

Jacob Nachman: Code comments, opcodes completed up to current status.

Nic Losby: Soldered V4 and debugging the power circuit again.

Nick Lang: Wrote tests for the memory unit.

Sean Hinchee: Analyzed and asserted a lack of regressions moving from old to new documentation.

Matthew Kirpes: Started looking into GPU serviceability.

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### Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Jacob Nachman	Completed bit operations and did opcode revisions, cleaned up the opcode file and commented with what needs to be implemented after system integration (interrupts etc.), and	13	63

	commented the file for readability.		
Nick Lang	Wrote tests to validate memory unit	10	59
Nic Losby	Worked on and ordered V2 of Button PCB; Ordered the power circuit as a separate PCB to help facilitate debugging.	10	62
Sean Hinchee	Set up Continuous Development for the emulator project (go build and go test are run). Added a series of tests and composed a TODO of potential bugs surfaced from testing and analysis. Acquired dev board for rpi3 with gpio buttons.	15	67
Matthew Kirpes	Work with jacob and Nick on the cpu integration.	9	49