



What we think "we think" we
know...

Group 3, D.M.P.

Definitions

LOW LYING FRUIT:

- An answer to a logistical or methodical question
- A task that can be completed quickly
- Not set in stone, but may set a nice starting point

STARTING ASSUMPTIONS:

- A temporary design decision necessary for further development
- Up for discussion, and may need to be updated
- Created to encourage the sharing of opinions from other groups

Concerning Group 1- Storage and I/O

Starting Low Level Fruit

- Fixed n^2 number of registers, n is an element of \mathbf{R}
- Single instruction fetch
- IO information will be stored to a memory location, addressable by the processor

Starting Assumptions

- An IO memory watcher may be effective for commands over a bus from the CPU
- The memory will need to be retrieved before the next clock pulse

Concerning Group 2- ISR and Init

Starting Low Level Fruit

- 5 pipeline stages: IF, ID, EX, MEM, WB
- Instructions will not be multi-fetched
- Yes on jump hardware and immediate hardware

Starting Assumptions

- Let registers hold full time, which is $24\text{hr} * 60\text{min} * 60\text{sec} = 86400$ unique values
- $2^x = 86400$, $x > 16.4$ bits, so if bits, $n = 2^k$
 - $k = 6$, $n = 32$ bits
 - Provided we don't need bigger numbers

Concerning Group 4- Power and Tests

Starting Low Level Fruit

- Modules:
 - PC, Register bank, 32bit ALU, Data Memory Access, 'a few' muxes and Adders for the PC
- Immediate, indirect, and register direct addressing modes

Starting Assumptions

- A Bus in the sense of a multi use multi address application may not be necessary
- Dedicated bus lines from some kind of IO manager to the memory may be more effective

Concerning Group 5 - Management

Starting Low Level Fruit

- We would like to have all of our work done by the end of the semester.
- We would like to schedule a design review so that our perception of the problem matches yours

Starting Assumptions

- There will be a location where we can store media with the rest of the project team

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Any Questions?

Thanks for listening

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