What should individual blocks represent? a single command?

What range of programs should the computer be able to run?

Flexibility is not of great concern. The machine should be able to do what is built for and nothing more.

How often should LED displays be used instead of physical representations?

Displays are absolutely acceptable for certain sections of the machine such as CPU. LEDs could show directionality and movement of electronic displays.

What should people learn from each section of the machine?

The goal is to explain how the computer functions. Should represent the way modern computers work through an analytical engine. Take the invisible functions of the computer and make them visible. Parts don’t need to be physical, they could be electronic displays and provide similar educational value, but mechanical systems are best.

How in depth vs practical will the design be?

Does the memory need to be organized in any particular way?

Should RAM be included in the design or should all memory be shown in a more general all encompassing sense?

With how much detail should the ALU be shown?

What kinds of flags should be included?

Flags can be on a screen.

How will blocks being moved work?

How much total storage should there be?

How much of the total storage should be visible?

What features should the leds have

Parts that should be included

Address bus, Data bus, registers, stack, CPU

The layout of the mechanical display doesn’t need to match the actual computer layout. It should be optimized for timing and mechanical efficiency while maintaining the educational value.

The machine should show the HOW of the calculations and sorting. Recursion, bubble sort, factorial, adding, and subtracting.

Stack represents main memory. LED strips shows the bus through binary.

Instruction pointer, register will be needed. Instruction register can be shown electronically.