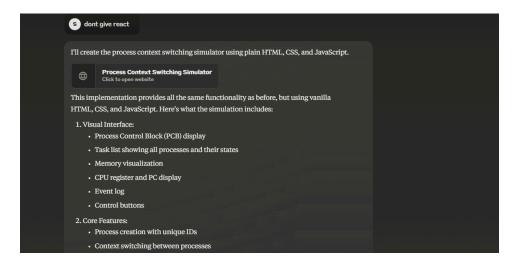
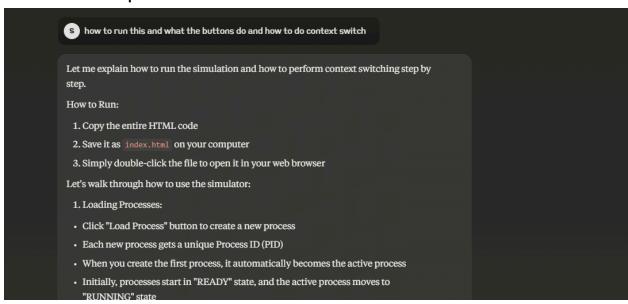
Claude-Prompt-1(also given image of the simulation)

S BELOW IS THE DESCRIPTION OF THE EXPERIMENT WHICH I WANT TO MAKE, MAKE IT USING HTML, CSS AND JAVASCRIPT. ALSO GIVEN IS THE schematic of the experiment's visual interface, 5.1 Processes and Context Switching 5.1.1 Topic description Anoperating system is designed to execute programs. A process is a program in exe cution. Running processes is the fundamental purpose of an Operating System. A pro cess is defined by the values of its registers and program counter, collectively called the context of the process. A process may be either running inside the CPU, or may 2 be waiting to be run by the CPU, or terminated. A process does not continuously oc cupy a CPU; instead it runs for some time and relinquishes the CPU and runs again, etc. This phenomenon is called context switching. A context switch happens, for example, when the process is waiting on a lock, or about to perform an IO operation or a system call, or when it is preempted by the CPU to let another process run as part of the CPU's scheduling policy. 5.1.2 Need for virtual experiment Processes and context switching involves multiple processes in multiple states, along with the per-process data structures like Program Control Block, kernel stacks, etc. Most textbooks have a verbose description of these structures and the actions that drive con text switches. A virtual lab for processes and context switch would allow the student to identify the main actors, the actions involved in the dynamics, and the consequences of those actions on the states of the processes and the data structures involved. By manu ally manipulating and driving the simulation, the student would be able to recreate the steps involved in a context switch. 5.1.3 Experiment Description • Objective: The objective is to simulate the life cycle of a process created in the ex ecution of programs. • Visualisation (View): The simulation will allow the student to view a collection of processes, and for each process, its state, process control block and other data structures. . Controls: The controls available drive the creation of a process and its associated data structures, the switching of contexts for a process from a running to waiting state and restoration of data when the process runs again. Through the controls, the student is expected to 'drive', for a few steps, the process lifecycle and context switching that is orchestrated by the operating system. • Validation: The sequence of student actions and states captured in a log may be validated to ensure that the per-process data structures are correctly manipulated by the student during

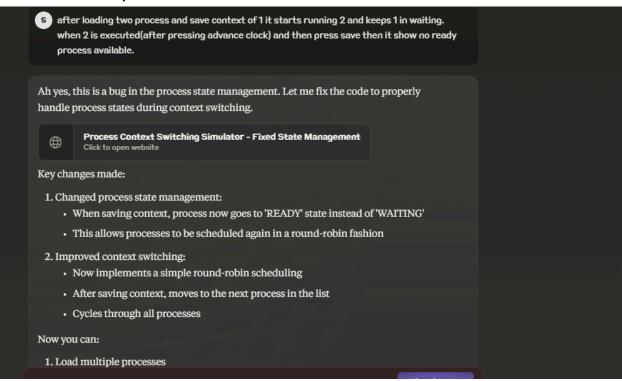
Claude-Prompt-2:



Claude-Prompt-3



Claude-Prompt-4



DeepSeek-Prompt-1(also included image of the simulation)

WhatsApp Image 2025-02-...

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To create a virtual experiment simulating processes and context switching using HTML, CSS, and

Deepseek-prompt-2(after this deepseek did not respond)

