

Machine Simulator – Instruction Guide Team 3

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Instructions on how to run the simulator:

1. Download the Zip from the blackboard, it will contain the following files
 - Project
 - i. SimulatorXCSA-1.0-SNAPSHOT.jar
 - ii. Program2.txt
 - iii. sentence.txt
 - Group 3 Instruction guide
 - Source Code(SimulatorXCSA.zip)
 - Design Document
 - Program 1 capture(showing the demonstration that program 1 works)
2. Depending on your operating system follow the below given instructions.
3. For Mac:
 - Copy SimulatorXCSA-1.0-SNAPSHOT.jar file
 - Open terminal at that folder
 - Run the file using command: `java -jar SimulatorXCSA-1.0-SNAPSHOT.jar`
4. For Windows:
 - Copy SimulatorXCSA-1.0-SNAPSHOT.jar file
 - Execute jar file by double clicking on it.

- Once the UI is loaded, click on Reset All button to reset the memory to empty and all register Values to 0.

The screenshot displays a comprehensive simulation interface for a computer system. At the top, a standard window frame with minimize, maximize, and close buttons is visible. The main area is divided into several functional sections:

- Registers:** On the left, General Purpose Registers (GPR 0-3), Instruction Registers (IXR 1-3), and Floating Point Registers (FR 0-1) are listed, each with a 32-bit hexadecimal value field and a 'LD' (Load) button.
- Control and Status:** On the right, the Program Counter (PC), Memory Address Register (MAR), Memory Buffer Register (MBR), Instruction Register (IR), and Memory Format Register (MFR) are shown. A 'Privileged' checkbox is also present.
- Execution Controls:** A central row of buttons includes 'Store', 'Load', 'init', 'Reset All', 'Program 2', 'Program 1', 'SS', and 'Run'. To the right of these are 'HALT' and 'RUN' status indicators.
- Memory and Examples:** Below the execution controls is a row of buttons for memory addresses (15 down to 0), with buttons for 'FADD Example', 'VADD Example', and 'CNVRT Example' to the left.
- Input/Output:** The bottom section contains four panels: 'Keyboard' (a large empty text area), 'Console Printer' (a scrollable output area), 'Field Engineers Console' (another large empty text area), and 'Cache' (a large empty text area).

6. Click on the VADD Example/FADD Example/CNVRT Example button.
7. Enter Run/SS to execute examples of requested commands.
8. Video Attached showing execution.
9. To open the project file, unzip "SimulatorXCSA.zip" file and open the folder in Netbeans or any other supported IDE. Run "Simulator.java" file from IDE to execute project from IDE. The code has been compiled using JDK 1.8.