**Embedded Systems Assignment  
Simple Processor Simulator**

**Simple processor simulator datasheet**

Simulator with UI. Select input as file with assembly code and executes instructions to display output of Memory, Registers and Instruction Pointer. Able to execute instructions step by step and display program contents.

**Memory Size = 256bytes.**

**Instruction Format:**

<OPCODE> <OPERAND1>, <OPERAND2> – 3byte instruction

<OPCODE> <OPERAND1> – 2byte instruction

**Addressing Modes:**

1. **Immediate**:

MOV <REGISTER>, <VALUE>

*Eg. MOV A, #10H*

*MOV B, #5H*

2. **Direct**:

MOV <REGISTER>, <MEMORY ADDRESS>

*Eg. MOV A, 40H =value present in memory location 40*

***Note:*** *Direct and immediate addressing is only for MOV operation (as per requirement)*

3. **Register**:

<OPCODE> <REGISTER1>, <REGISTER2>

*Eg. ADD D, A - performs D = D + A*

**Java Classes used:**

>>ProcessorRegisters

>>ReadUploadedFile

>>ReadUploadedfile1

**JSP pages used:**

>>Main.jsp

>>FileUpload.jsp

>>Execute.jsp

>>Final.jsp