

# RISC-V SIMULATOR

## GUIDELINES :

- Assembly program can contain .data and .text sections. There should be no text, apart from comments or blank lines between two sections
- The .data section can contain labels pertaining to word. Only integer type data is supported
- When referring to a register, they must be referred by their ABI names. Only ABI names are supported
- In the .text section, a line containing a label should not have any instruction
  - Label:  
add t0,t1,t2 ✓
  - Label: add t0,t1,t2 ✗
- Any memory element created in the data section is assigned an address starting from 0x10010000
- Except address which is displayed in hexadecimal form, other all values are displayed in decimal number system
- If there are any errors in the syntax of assembly code simulator throws an error and stops execution of file
- Comments are supported

## HOW TO USE :

- Download the zip file
- Paste your assembly code into instructions.s assembly file
- Run simulator.py

## **SPECIFICATIONS :**

- Each instruction is of 32 bits
- Simulator supports instructions specified in README.md file
- Two execution modes:
  - Execution Mode – The program will execute all the instructions and display the contents in registers and memory.
  - Step by Step Mode – The program will run a single instruction at a time, next instruction will be executed only when the user presses a key