

# Report

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Input is given in the form of a file. So, I had read the file and stored it into a vector of strings (since c++ supports vectors (similar to array) and strings). Converted each hex instruction into a binary instruction by using "hextobin" (created by me). After that I pass both hex instruction and binary instruction into a function "instructions" (created by me). In this function I categorized the type of instruction using opcode obtained from the binary instruction and then for each type of instruction I had written different functions i.e;

- "Rtype" for R-type instruction
- "Itype" for I-type instruction
- "Stype" for S-type instruction
- "Utype" for U-type instruction
- "B1type" for B-type instruction **without labels**
- "B2type" for B-type instruction **with labels**
- "J1type" for B-type instruction **without labels**
- "J2type" for B-type instruction **with labels**

## Rtype :

As R-type instructions have a single opcode. so, I didn't pass that as an argument to the Rtype function, passed bin instruction as string as arguments. To calculate rs1, rs2, rd , I







