Project - Y86 Simulator
Part A

Y86 Assembler

Write a program to simulate a Y86 Assembler that translates Y86 code into machine language. The assembler should support the following:

- 1 – 1 mapping of instructions to encodings
- Resolves symbolic names.
- Supports the following assembler directives
    - .pos x: Subsequent lines of code start at position x.
    - .align x: Align the next line to a x-byte boundary.
    - .long x or .quad x: Put an 8-byte value x at the current address.

      (A way to initialize a value.)

You can use the following example in the Practice Problems.pdf file in the Modules section as a guide to test your assembler implementation.

Please note that the alignment may not confirm to the alignment you are using, so you may have to adjust the alignment to fit your assumptions.

We can use the same sheet as a reference for the y86 commands and the implementation of the various stages.