

Assignment 5

Name: _____

Direction: Upload your typed solutions in a file named “assignment05.txt” to your Github account.

1. List and briefly define the possible states that define an instruction execution with interrupts.
2. List and briefly define two approaches to dealing with multiple interrupts.
3. Write the following C++ functions for a memory module.
 - A void function named `Initialize()` that takes a `fstream` reference parameter and an `int` parameter named `ram`. It rewrites the file referenced by `ram` with 100 rows of 32-character strings of zero.
 - A string function named `Read()` that takes a `fstream` reference parameter and an `int` parameter named `ram` and `addr` respectively. If `addr` is between 0 and 99 inclusively, the function returns the line of the file referenced by `ram` whose value equals `addr`; otherwise, it returns an empty string. The first line starts from 0.
 - A void function named `Write()` that takes a `fstream` reference parameter, a string parameter and an `int` parameter named `ram`, `data` and `addr`. If `addr` is between 0 and 99 inclusively, the function writes `data` on the line equal to `addr` of the file referenced by `ram`; otherwise, it does nothing.