Multithreaded Job System

Purpose of the System:

The purpose of a multithreaded job system is to make the game run as smooth as possible by maximizing the use of the CPU cores in your computer example, in your game you might have two loops being executed update and render. During the update loop you might also be calculating complex data such as pathfinding which may slow down the render process due to the time being dedicated calculating the complex data. So instead you branch off the pathfinding and other complex data into separate threads and run them through a job system which will grab the data from the update loop, process it concurrently to the loop and output the processed back into the loop.

Additional Library’s the System Requires:

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Thread: Creates a single thread of execution which will allow multiple functions to be executed concurrently with the main thread.

Mutex: Locks and unlocks the threads preventing any race conditions.