

**Spike: 4****Title:** None Blocking Game Loop**Author:** Steven Efthimiadis, 1627406**Goals / deliverables:**

The goal is to create a game loop that continuously runs while waiting for a trigger to activate it. Use the Gridworld game made in Spike 1 to build on.

To create this spike, you require:

- Spike 1
- Thread that take input
- Thread that operates the output and rendering

**Technologies, Tools, and Resources used:**

List of information needed by someone trying to reproduce this work

- Visual Studio 2015
- Multithreading
  - <https://solarianprogrammer.com/2011/12/16/cpp-11-thread-tutorial/>
- Timers
  - Modulus - <http://www.cplusplus.com/reference/cmath/>
  - Time - <http://www.cplusplus.com/reference/ctime/>

**Tasks undertaken:**

- Copy Spike 1 into a new project
- Separate the input into one thread
- Separate the output and rendering into another thread
- Once working create a timer which the rendering thread will run on a limit before an error message appears.

**What we found out:**

- By separating the input and rendering into 2 threads we stop the blocking game loop by the threads waiting to be activated and when it's complete it will delete the thread.

**What didn't work:**

- The time for the input thread. I tried using modulus to work out if the time has been 2 seconds. The modulus wasn't working properly which caused the console to spit out it constantly that 2 seconds has past.