

Snake 2: The Snaking

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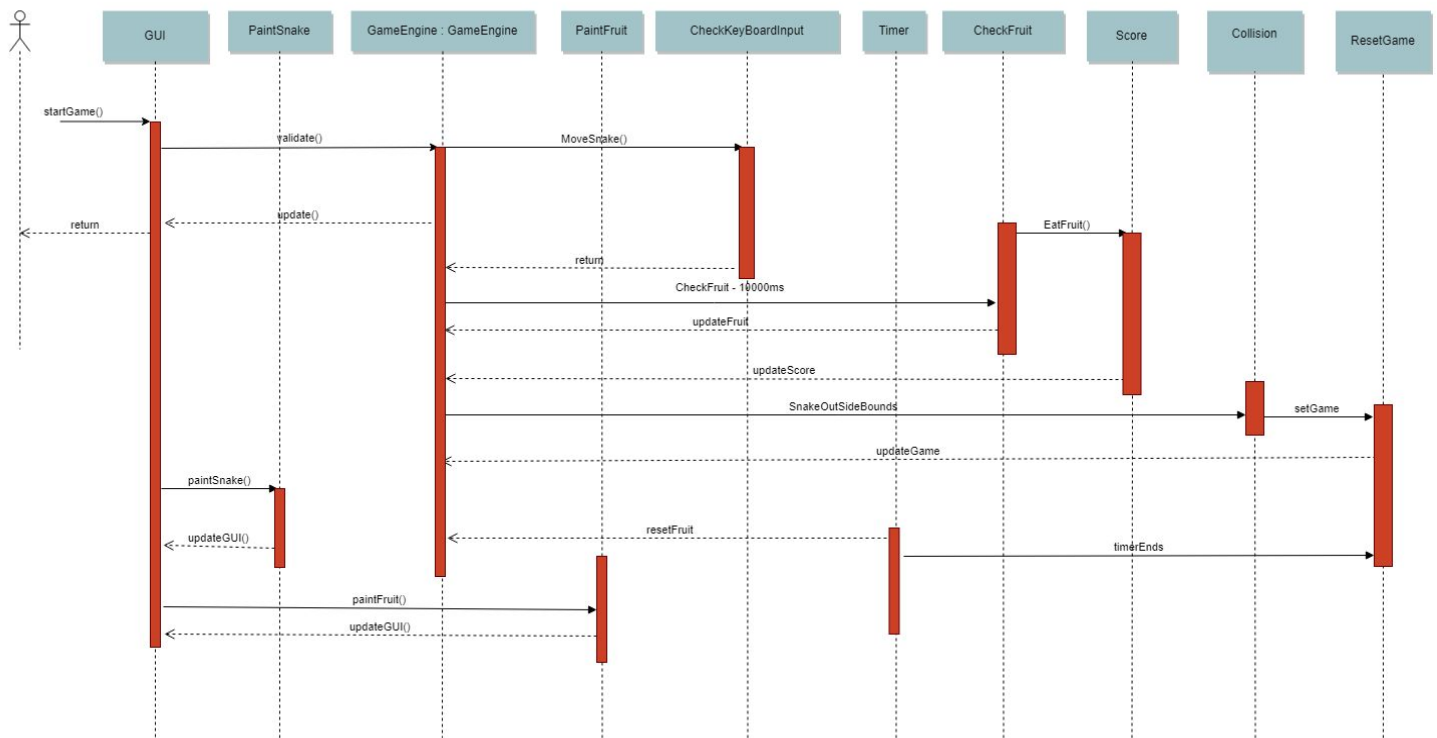
ChangeLog

Changes from version 1.10 to version 1.11:

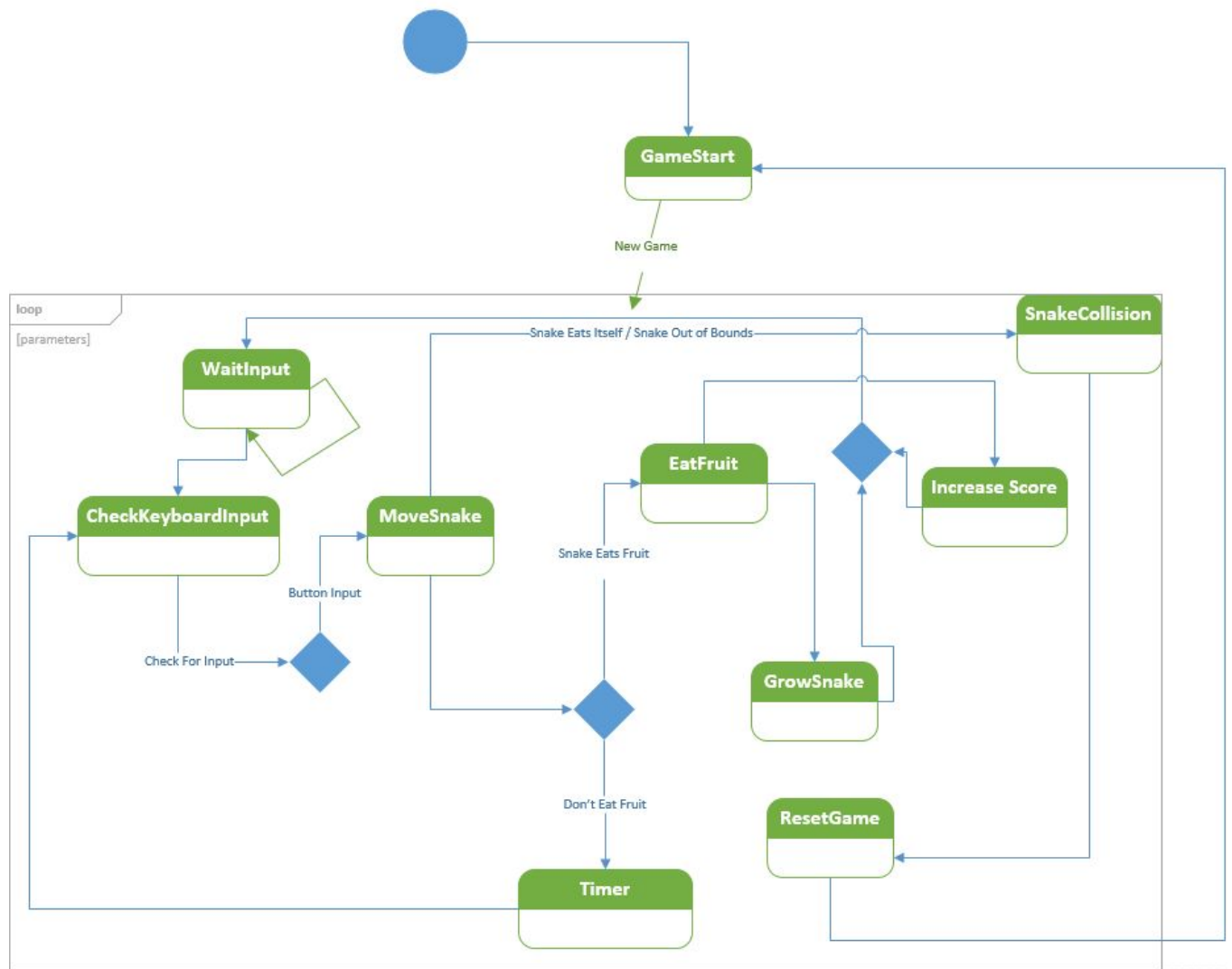
- GUI Completely overhauled
- Snake can now move automatically
- Threads created to separate game logic from paint logic
- Difficulty settings added (can be triggered using the QWERTY numpad)
- Fruit color updated to make it stand out more
- Starting snake direction edited to be properly random
- Snake can now spawn in a 'corner' formation, rather than a straight line
- Lawyers contacted to allow use of GameBoy™ brand logo
- Edits to directional functions to allow for easier play
- Snakes unionized
- Score updated to reference current difficulty setting
- Pause button given functionality, as well as designated key (spacebar)
- New game given designated button (escape)
- Fruit to POSIX Timer

Multi-Task Design

a.

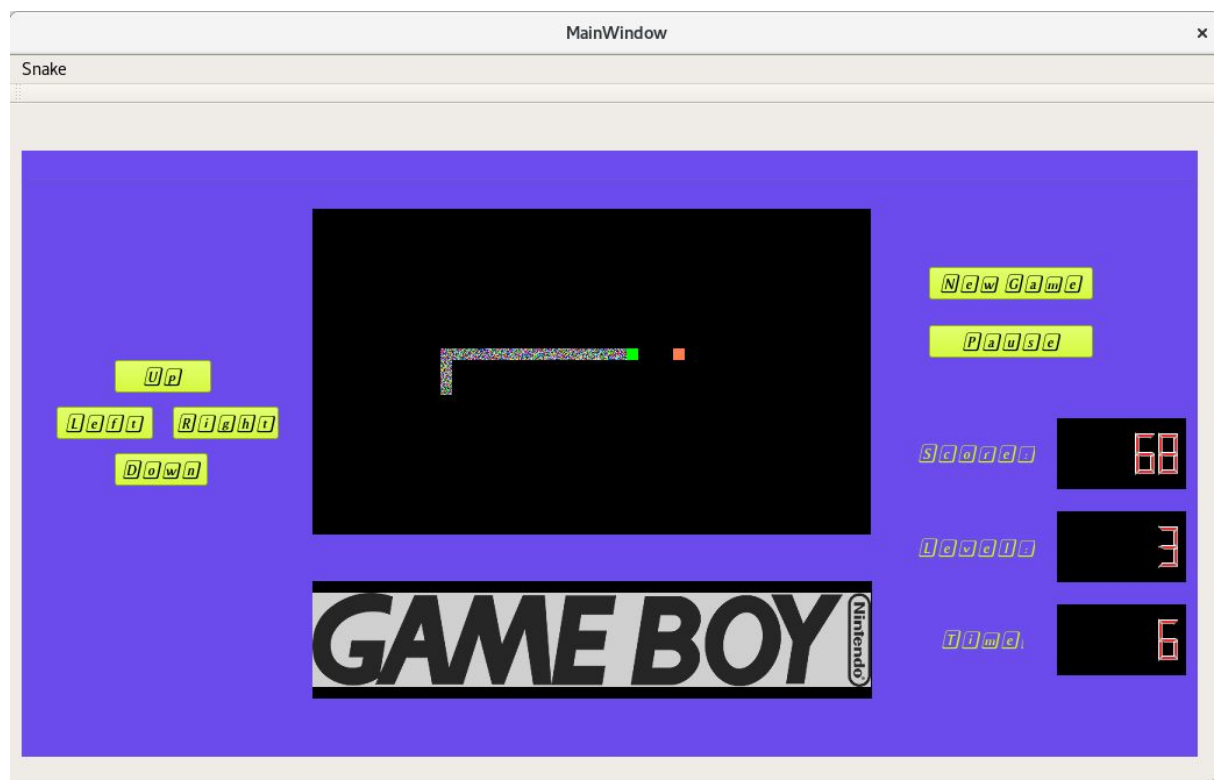
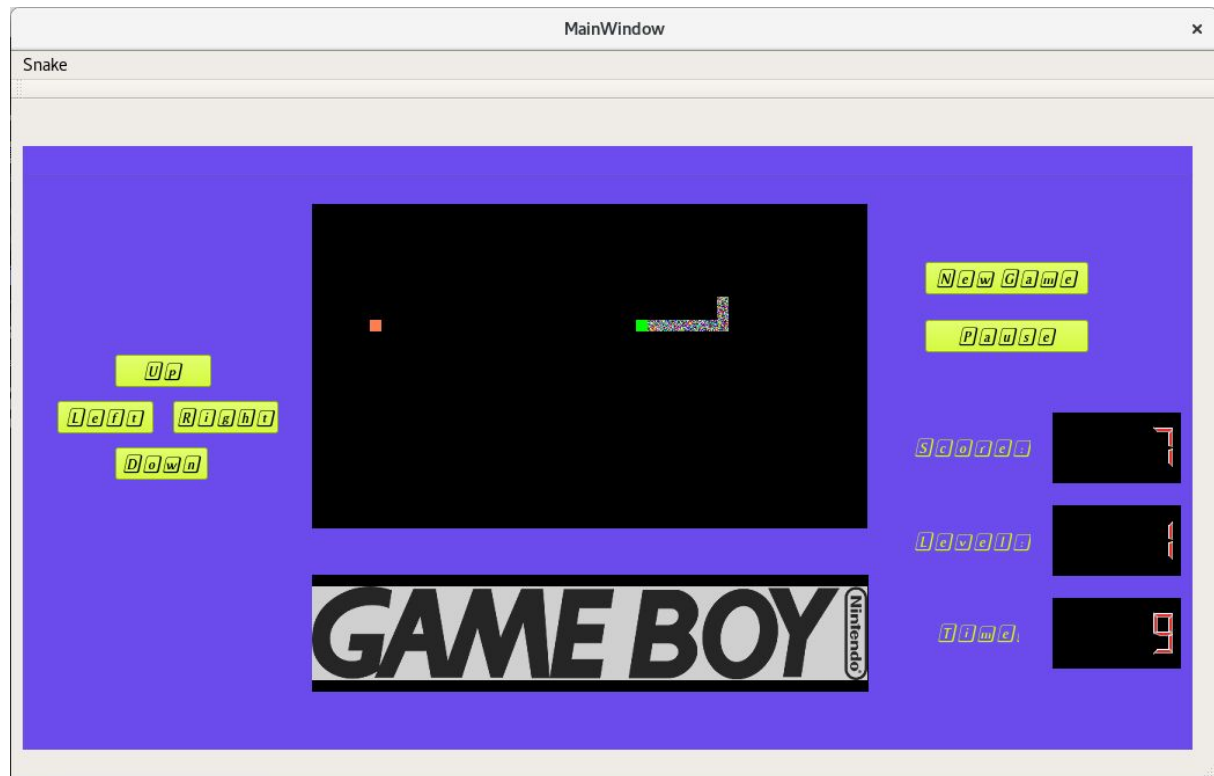


b.

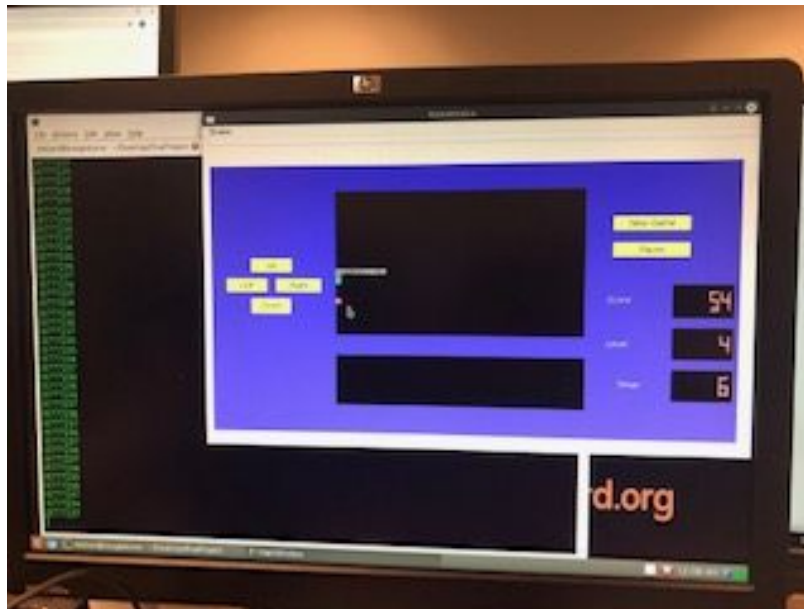


System Implementation

a. A few screenshots of the execution of your system.



b.



- I. Flash the Beaglebone with the image provided for us by Professor Byrnes.
- II. Copy files from Eclipse over to the Beaglebone as we've done for previous labs.
- III. Run these commands on the terminal:

```
touch .qmake.stash  
make
```
- IV. In the event that the above two commands do not work. Run the following command in the terminal:

```
touch lab11.pro  
Qmake  
make
```

Lessons Learned

Larry: My understanding of multithreading has improved as a result of this project and I gained a solid knowledge of the POSIX standard. Also, working with the BeagleBone deepened my grasp on microcontrollers and how to build images on them. Learning more about signals and timers as well as building a GUI in C++ was beneficial and interesting.

Dan: I learned a few things from implementing multiple threads and making a GUI in C++. Using a microcontroller in this way was somewhat new to me.

Chase: I learned how to work a project through a BeagleBone embedded system. I also learned better coding practices and how to work things through embedded systems as a whole. I improved upon my knowledge of a UNIX system and timers/threading.

MaryAnne: This was my first time working with the Debian VM and BeagleBone so I learned a lot about how the two communicate. I learned a lot about working with embedded systems and creating an extensive project like this. This project furthered my understanding about threading, as well as the importance of resource sharing.