**CSE 3237 Parallel Programming Course**

***Finding Value of with Monte Carlo Simulation***

*Ayşenur Büyükbal 170316007*

This document is being presented in order to give brief description for python files following below to reader.

ZIP Content:

* classes.py
* classeswithnumba.py
* singlethread.py
* multiplethreads.py
* jitnumba.py
* readMe.docx

Homework covers:

* Finding value of with single thread
* Finding value of with multiple threads
* Finding value of with multiple threads by using ***Numba JIT*** compiler

How it works?

I am expected to find value of with “Monte Carlo Simulation” with different types of techniques.

* ***singlethread.py*** file solves the problem with classes that it imported from ***classes.py.***
* ***classes.py*** file includes the *TicToc* and *FindE* classes, which implement parts that time counting and main calculations of the problem.
* ***multiplethreads.py*** file imports those two classes from “***classes.py***” file. Instance of “*FindE*” class’s is being created in this file. Threads are also created in this file.
* In order to use Numba JIT compiler, we have to do some arrangement in our classes. So, I have copied the “***classes.py***” file to another python file which named “***classeswithnumba.py***”. In this file, I changed atomic part of the *“FindE”* class as static method and imported ***JIT*** from ***Numba*** library.
* ***jitnumba.py*** file imports “*TicToc*” and “*FindE*” classes from ***classeswithnumba.py*** instead of classes.py because of the last arrangements I did in the class file to be able to use ***JIT***. This file

Performance chart

![tablo içeren bir resim

Açıklama otomatik olarak oluşturuldu]()

