**CMSC214**

**Project\_10**

**Derya O. Kurin**

**Screen shots:**

Chart, pie chart

Description automatically generated**Chart

Description automatically generated**

**Lessons Learned:**

With this project, I learned to use Thread class in an FX animation. Thread class provides a number of useful methods for thread management such as sleep(), interrupted(), join() etc.

For this project the Thread methods used were sleep, resume, suspend. I learned that A thread needs an infinite loop to start the thread and uses sleep method to set intervals in the animation. I also learned that we can use Tasks but for basic operations we can use Platform.runlater() method to update the GUI. In this project I used Platform.runlater with the move() method, which updates a part of the UI in the Application Tread. It in order updates the angles of the arches and this call updates all the other settings accordingly. Sleep method is called right after which pauses the Thread only for a defined millis of time and after the Thread reruns and calls the move method again and the same process takes place again. This way we get a moving fanpane animation.

I learned that Threads are essential when we want the program run efficiently and using the CPU time with its full potential, and letting the user do other tasks while the program is already running a task.

For this kind of animation projects, I still find the Timeline class of Animation mush easier to implement and would prefer to use Timelines for basic animations. Howeer in general, as a practice this project was useful. Learning to apply Threads and being familiar with it provides better programming practices. Since the real-world projects require programmers to write programs with the highest possible efficiency and with lowest cost, Thread class is an essential topic to know in detail.

**Check List**

|  |  |  |  |
| --- | --- | --- | --- |
| **#** |  | **Y/N** | **Comments** |
|  | Source java files | **Y** |  |
|  | Files: |  |  |
|  | LastNameFirstInitial\_Project10.zip | **Y** |  |
|  | LastNameFirstInitial\_Project10.doc | **Y** |  |
|  | Program compiles | **Y** |  |
|  | Program runs | **Y** |  |
|  | Checklist is completed and included in the Documentation |  |  |
|  | Documentation file: |  |  |
|  | ~~Comprehensive Test Plan (integrated into the main()~~ |  |  |
|  | Screenshots of running program | **Y** |  |
|  | ~~UML diagram~~ |  |  |
|  | ~~Algorithm: Pseudo-code or Flowchart~~ |  |  |
|  | Lessons Learned | **Y** |  |
|  | Checklist | **Y** |  |