**CSE 465/565**

**Data File**

An athlete’s physiological data is recorded in a file named run.txt. This file looks like the following:

0 68 25:34 48

1 68 25:50 48

2 68 25:34 48

3 68 24:57 48

4 68 18:00 50

5 68 07:57 67

6 68 07:54 83

7 68 07:52 86

8 68 07:52 86

11 82 07:54 86

12 82 07:53 86

15 102 07:51 86

16 110 07:54 86

17 118 07:55 86

18 119 07:56 86

20 125 07:57 86

21 125 07:58 86

Each line of the file contains data at successive intervals. In this particular example, the data includes four pieces of information: 1) time stamp (in seconds) 2) heart rate 3) pace (in minutes/mile) 4) cadence (in half strides per minute)

The end-goal of this project is to analyze the data on produce statistics such as:

* How much time was spent at paces between 7:00min/mile and 7:30min/mile, for example?
* How much time was spent at heart rates above 155?
* What was the longest consecutive period of time holding a cadence between 90 and 96?

You do not have to solve all of these problems, but should solve the following problem:

* What was the longest consecutive period of time holding a pace between 6:30min/mile and 7:00min/mile? Assume that the two ending values are configurable.

Your solution, however, should help developers to implement the future enhancements.

In your report, show the output for the following intervals:

[6:30, 7:00] [7:00, 7:30] [7:30, 8:00]