**Venkata Sai Akhil Vemula (002981289)**

Program Structures & Algorithms  
Fall 2021  
Assignment No. 2

**A) Tasks Performed:**

1. Implemented Methods in Timer.java

Graphical user interface

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Graphical user interface, text

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1. Implemented Insertion Sort logic for both the cases (instrument = true and false)

Graphical user interface, text

Description automatically generated

1. Added Main Method for running Tests on Insertion Sort. Also added logic to get output in the form of CSV.Text

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**B) Analysis**

Graph 1: time (ms) vs length of array

Chart, line chart

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* From the values obtained, it can be observed that it takes longer time to sort reversed array compared to others.
* It takes longer time to sort random array compared to Partially ordered and ordered arrays.
* It takes very less time for processing Ordered Array.

**C) Unit Tests & Main Code Output Screenshots**

Image C1) BenchmarkTests

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Image C2) Timer Tests

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Image C3) InsertionSortTests**Text

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Image C4) Main Method Output

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