Program Structures and Algorithms

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GITHUB LINK: https://github.com/gunjalga/INFO6205

**Task: ASSIGNMENT 3 (BENCHMARK)**

**Unit Test : A screenshot of a computer

Description automatically generated**

**A screenshot of a computer program

Description automatically generatedA screenshot of a computer

Description automatically generated**

**Timings:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. of Elements** | **Random** | **Ordered** | **Partially Ordered** | **Reversed** |
| **10** | **0.007727** | **0.002982** | **0.00483** | **0.00517** |
| **20** | **0.009671** | **0.00431** | **0.00736** | **0.009252** |
| **40** | **0.019014** | **0.00551** | **0.01615** | **0.03895** |
| **80** | **0.08863** | **0.00811** | **0.06764** | **0.13777** |
| **160** | **0.114603** | **0.01792** | **0.09908** | **0.15420** |

**Conclusion:** Looking at the data it can be concluded that the insertion sort algorithm has better performance on nearly sorted or partially sorted inputs compared to randomly arranged or reversed inputs.