



CMPS302-SPRG24-Design & Analysis of Algorithms Hw2

Student:

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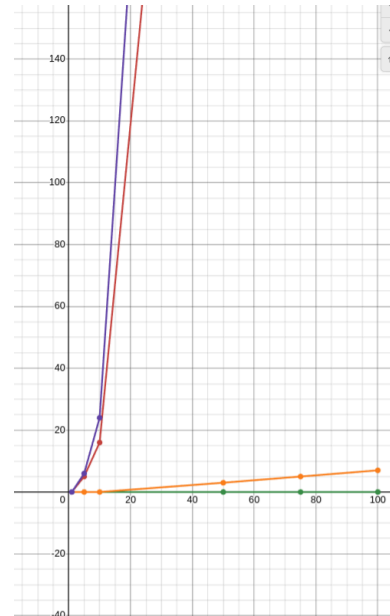
Sorted input Graph

Red Selection

Greedy Insertion

Yellow Merge

Purple Quicksort



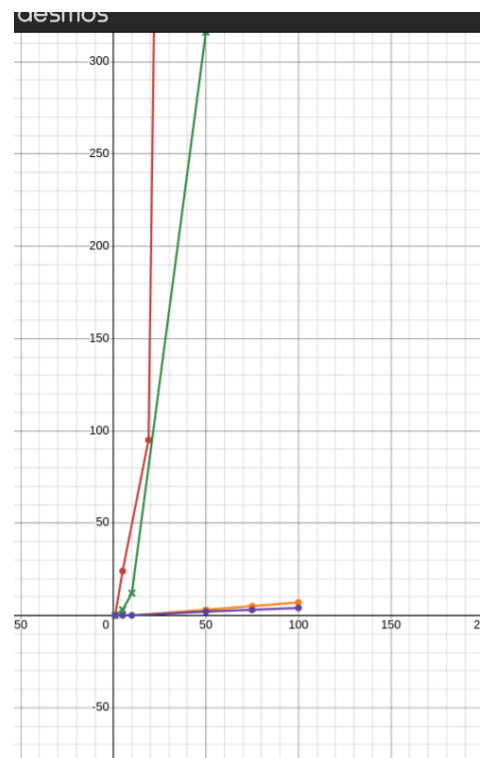
Random Input Graph

Red Selection

Greedy Insertion

Yellow Merge

Purple Quicksort



Hybrid Sorting Algorithm

checks if the Input is sorted or not then apply threshold

not sorted Input :

Insertion < 16

QuickSort from 16 to 62000

Merge sort after that

For sorted Input :

Selection < 16

after that quickSort

The decision was taken based on the graph and benchmarks and inspired from already existed hybrid algorithm like intro sort and tim sort .

Was trying to build ML model To decide but didn't manage the time right i'm still working on it and i will finish it soon for future reference i will push it on this repo

https://github.com/Belal-Sabbaq/HybridAlgorithm_IMQS

