**Program Structures and Algorithms – Assignment 6 Spring 2023 (SEC – 3)**

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**Task**: To execute benchmarks for merge sort, dual-pivot fast sort, and heap sort in order to discover the best predictor of the overall execution time for sorting algorithms. Relationship Analysis: It can be safely concluded that Hits, Swaps, and compares can be used as predictors for the runtime for merge sort, dual pivot quick sort, and heap sort, with number of hits giving a more accurate prediction, by comparing them with the runtimes when instrumentation is not used.

**Conclusion**: Hits is the best predicter for runtime.

**Graphical Representation**:

**Unit Test**:

Text

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence

Text

Description automatically generated