

Project 10 Name: Algorithm Visualization

Group 10 Names: Joshua Swaida, Jason Tralongo, Aidan Shepston, Harleigh Kyle Chua, Bach Luu

Group 10 Manager: Yona Voss-Andreae

Assignment: Software Metrics Group Submission

## Function Points for Algorithm Visualization Project:

### 1. Internal Logical Files (ILF):

- **Definition:** User-identifiable groups of related data maintained within the system.
- **ILFs in this project:**
  1. **Array Data:** Internal storage of arrays for sorting.
  2. **Graph Data:** Internal storage of graph nodes and edges.
  3. **Algorithm Data:** Internal data structures for the sorting and traversal algorithms.
- **Count:** 3
- **Complexity:** Average
- **Weighting Factor (Average):** 10

### 2. External Interface Files (EIF):

- **Definition:** Files that the application references but are maintained by another system.
- **EIFs in this project:**
  1. **PostgreSQL Database:** Stores user-created algorithms and configuration data.
- **Count:** 1
- **Complexity:** Average
- **Weighting Factor (Average):** 5

### 3. External Inputs (EI):

- **Definition:** Processes that capture data from outside the system's boundary and provide it to the application.
- **Specific Inputs for the Project:**
  1. **User Input for Array/Graph Initialization:** Users provide array or graph data manually or via file upload.
  2. **Algorithm Selection:** Users choose from a list of sorting or graph algorithms (e.g., QuickSort, MergeSort, BFS, DFS).
  3. **User Trigger for Algorithm Execution:** Users click "Run" to start the selected algorithm on the array or graph.

- 4. **Custom Algorithm Input:** Users input their custom algorithms, which are saved to the database.
  - **Count:** 4
  - **Complexity:** Average
  - **Weighting Factor (Average):** 4

**4. External Outputs (EO):**

- **Definition:** Processes that send data from within the application boundary to external entities.
- **Count:** None applicable in this project (No external inquiries).
- **Weighting Factor (Average):** 0

**5. External Inquiries (EQ):**

- **Definition:** Queries or requests for information without any modification to the data.
- **Count:** None applicable in this project (No external inquiries).
- **Weighting Factor:** 0

Total Function Points: **51**