**File Processor Design Specification**

**Objective:**

The File Processor is designed to read, process, and analyze data from input files, perform statistical calculations, and generate structured output files.

**Components**

**Input Files:**

- The application accepts one or more input files located in a specified directory.

- Input files contain structured data with columns, such as ID, first name, last name,email, job title, basic salary, and allowances.

-The data format is typically tab-separated values (TSV).

**Data Processing:**

- The input files are read and processed to extract data fields.

- 1.Data processing includes:

- 2.Parsing input files.

- 3.Handling the header row (if present) and ensuring data consistency.

-4. Storing data in an internal data structure for further analysis.

**Data Analysis:**

- The application performs data analysis to:

- Identify and remove duplicate records based on the 'ID' field.

- Calculate the second-highest salary and average salary for the dataset.

- Prepare the data for output.

**Output File Generation:**

- An output file is generated with the following structure:

- Header: Column names include ID, first name, last name, email, job title, basic salary, allowances, and gross salary.

- Data Rows: Each row represents processed data entries.

- Footer: Contains two rows displaying 'Second Highest Salary' and 'Average Salary' followed by their respective values.

**Functionality:**

- The application reads and processes the specified input files.

- It removes duplicate records to ensure data integrity.

- It calculates the second-highest and average salaries.

- The output file is formatted according to the specified structure.

**Output:**

- The output is an organized CSV file with processed data and calculated statistics.

- The application provides clear feedback to the user about the file location.