1. **Master Process Reads the Matrix**

   Only the master process (rank 0) reads the matrix from the binary file.

2. **Matrix Dimensions Broadcast**

   The master process broadcasts the matrix dimensions to all other processes.

3. **Scatter the Matrix**

   The master process scatters chunks of the matrix to each process. The **sendcounts** and **displs** arrays manage the distribution of data.

4. **Local Maximum Calculation**

   Each process calculates the maximum value of its chunk of the matrix.

5. **Global Maximum Calculation**

   All processes contribute to finding the global maximum using **MPI_Allreduce**.

6. **Normalization**

   Each process normalizes its chunk of the matrix using the global maximum.

7. **Gather Normalized Matrix**

   The normalized chunks are gathered back to the master process.

8. **Write to File**

   The master process writes the normalized matrix to a binary file.