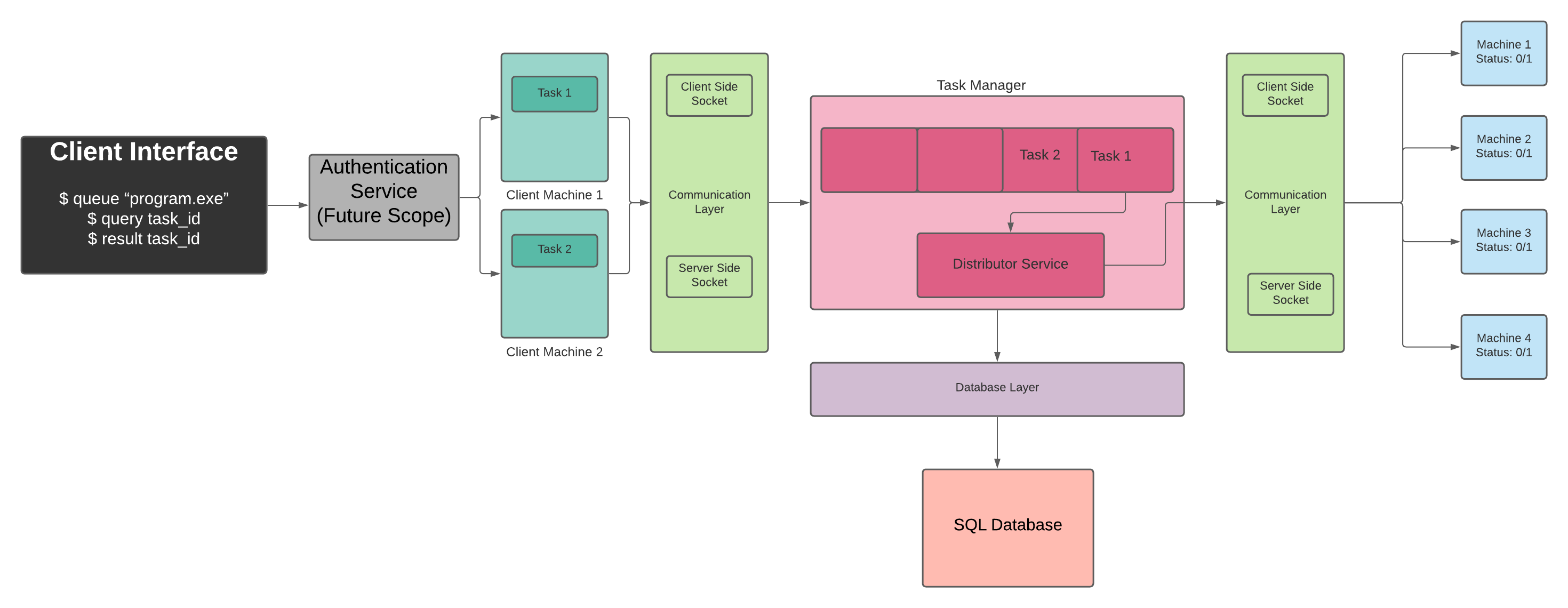
Design Document - Task Distribution System : Batch-3

Team -  
Vaibhav Gehani  
Sachin Vaze  
Hitika Ailani  
Deepa Binnal  
Anjali Chaudhary  
  
***System Diagram***



**Flow Diagrams:**

Project flow diagrams are drawn by considering the **type of requests** from clients.

* **Client request to queue a task**

Diagram

Description automatically generated

* **Manager sending a task to execute on a Node**

Diagram

Description automatically generated

* **Client request to get Status/Result for the given task ID**

Diagram

Description automatically generated

**Sequence Diagram (Data Flow) :**

Client machine will be sending Tasks to the Task Manager and later Task manager will push the task to the queue. Now task will be assigned to the node for executing the required task. Once Task is being executed, its result is being updated to the database and task status needs to be updated in the database as well.

Commands can be executed in 3 ways: -

1. Client sending task to Task Manager. (**$ queue “program.exe”**)
2. Assigning task from queue to Node and Checking the status. (**$ query task\_id**)
3. Task execution by Node and updating result to the Database. (**$ result task\_id**)

In the above case, Queue and Database managing operations are managed by the Task Manager and Nodes will be running on the ports available on the machine. Data will be shared across the components using socket programming.

Diagram

Description automatically generated

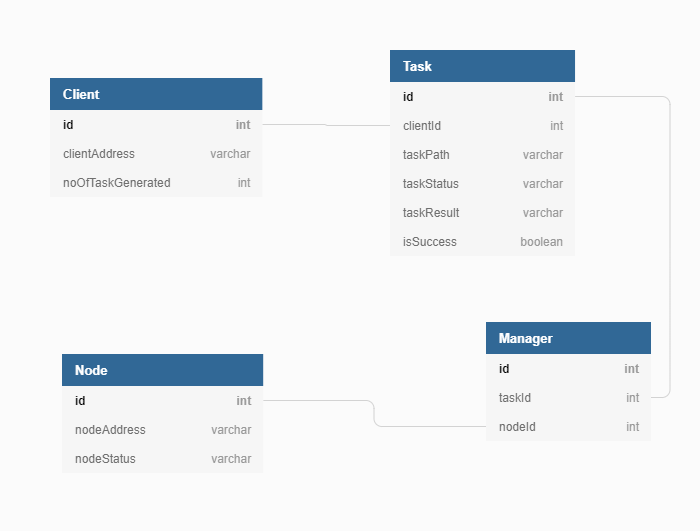
**Class Diagram:**

Graphical user interface, text, application

Description automatically generatedDiagram

Description automatically generated

**Database - Relational Tables:**



**Communication Layer:**

Table

Description automatically generated with medium confidence