Client tier:

1. Mobile Client:

The client mobile is the application that has to be downloaded and installed in the mobile devices from the application stores of the various OSs. It communicates directly with the connection handler through which it sends and receives all the messages necessary to the application in order to fulfill its functionalities.

1. Web Client:

The web client, differently from the mobile client, has no need to be installed in the PC device of the users, but is sufficient to use a web browser (e.g. Chrome, Safari, Firefox, …). All the messages that the web client sends and receives from the Connection handler pass through an external Web server.

Web tier:

1. Web Server:

This component, which is not integrated within MTS, is an external service offered by GlassFish and is written entirely using Java EE. It puts in communication the web client with the connection handler. This component is needed in order to let the information coming from the connection handler to be readable by the web browser, so it handles only the presentation layer of the application. All the application logic is handled by the Application controller in the Business tier.

Business tier:

1. Connection handler:

The connection handler is the component that handles all the communication between the client tier and the application itself. It is connected with the Controller application and the Security Manager. It sends all the information parsed in XML transparently with respect to the client components.

1. Application controller:

This component is the core of the application, it communicates with all the other components in the business tier. It handles the logic of the application.

1. Ride manager:

This component is necessary to handle successfully all the matchings between a user and a driver in order to have all the right information of a ride and to send all the notifications to the right users and drivers. The Application controller handles the Ride manager and it contains some of the main algorithms described in Chapter tal dei tali.

1. Queue manager:

This component is another important part of the application since it handles all the placements of the various taxis around the zones. It contains the main algorithms for the queue management described in Chapter tal dei tali. The Queue manager communicates only with the Application controller.

1. Security manager:

The security manager is the component that has to grant the security of the application. It prevents guests who are not enrolled to the system to access to it. It also ensures that all the private information about the users are kept safe.

1. Data access manager:

This component has the task to communicate with the Data tier and more precisely with the DBMS. It receives all the information to store or to retrieve to and from the DBMS and links the Application controller and the DBMS. It uses JDBC to communicate with the DBMS.

Data tier:

1. DBMS:

This is the Data Base Management System, which has the task to store correctly all the data received from the business tier and to retrieve all the information that the Data access manager asks to it. The DBMS runs with MySQL and it must ensure the durability and consistency of the stored data.