

0.0.1 Logic Tier

In this Tier there are implemented all the classes and the objects that are used to logically organize the requests and the responses from/to the Presentation Tier and the Data Tier. This Tier represents the Controller of the MVC software design pattern and it's composed by these components:

- **IO Manager:** This component is in charge to collect all the requests from the myTaxiService clients and to forward them to the correct component of the system by calling other components functions. It's also in charge to collect messages (like notifications, error messages...) from the internal components and to forward them to the correct user.
- **Requests an Reservations Manager:** This component receives from the IO Manager component requests that concerns requests for taxis and for reserve a future taxi ride. It's in charge of check the validity of the data that receives and, if it's the case, to call functions of the Database Manager to insert these requests into the database.
Another task of this component is to continuously check if there are some requests or reservations that are unhandled in the database and to allocate a taxi that has to be selected using the Zones Manager. Once a taxi is allocated, then a notification to the Taxi Driver is sent through the IO Manager.
- **Zones Manager:** This component is in charge to manage the zones of the cities. It receives GPS updates of Taxi Drivers from the IO Manager and compute them to update the zone queues of the relative city. This component also orders Taxi Drivers queues in function of their priority and provide some useful functions (for instance: get the first available Taxi Driver).
- **Profile Manager:** This component receives requests by the IO Manager that concerns the visualization or the modification of the users profiles. It checks if the modifications can take place and then calls Database Manager functions to modify the database entries. Once a modification is performed, then this components will send a notification to the user by calling the right IO Manager function.
Another task of this component is to provide registration and login functions to the users interacting with the Database Manager.
- **Facebook API Manager:** The Facebook API Manager is in charge to communicate with the Facebook system to perform Facebook Login and Registration. Once the transactions with the Facebook system is ended, then all the data are communicated to the Profile Manager as for a normal Login or Registration.