# CA110
# Database Schema 1.0

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## Content

# 1.0 General Layout

**1.1 Database Description**

The database we are using is MongoDB. it is a common light weight no-SQL database. The database is made up of collections. A collection is a set of documents which all have something in common.

**1.2 Collections**

The collections are as so :
- Authentication Collection
- Player Collection

# 2.0 Authentication Collection

### 2.1 Collection Description
The authentication collection is only written to by the authentication server. other servers may need to read the data but may not write (e.g. the game server needs to verify a login).

### 2.2 Document Schema
Values :
- Username *-string*
- Id *-integer*
- Password *-string (Encrypted)*
- Email *-string*
- Token *-string (optional)*

### 2.3 Schema Description
The optional values in each player's document in the authentication collection are not always present. This is important because of the following : When a user logs in through the authentication server, the server will add a token value to his document in the authentication collection. The player would then use that token to authenticate to the game server. The game server will find said players document in the authentication collection and check if it has a token value. if so it compares the tokens and allows the login accordingly.

# 3.0 Player Collection

### 3.1 Collection Description
This collection is edited by the game server AND the trading server.

### 3.2 Document Schema
- Username *-string*
- Id *-integer*
- Position *-object {x:,y:,z:}*
- Orientation *-object {x:,y:,z:}*

### 3.3 Schema Description
This Document Schema holds general information about where certain users are in the world. It is generally updated only upon a player disconnecting from the server.