1. **Introduction**

This document will cover how to establish connection with the MongoDB server. It will show how to access in text mode through the command line and connection examples for PHP and JAVA.

2. **Service access information**

   Server name: mongodb-rdlab.lsi.upc.edu
   Port: 27017

You can get a *username* and *password* by mail at rdlab@lsi.upc.edu or by web at http://rdlab.lsi.upc.edu/index.php/en/services/resources-request.html

**NOTE:** Database name will be the same as your *username*. 
3. **Text mode connection**

In order to connect in textual mode (terminal or Command Line Interface) we can type this command while in a Unix system:

```
mongo mongodb-rdlab.lsi.upc.edu
```

This way a connection with the server will be established, but it is still necessary to authenticate against the database:

```
use <database>
db.auth("<username>","<password>")
```

With “show collections;” we can check if we can list the contents of our database:

```
show collections
```

4. **Php connection example**

Prior to establishing the connection, it is necessary to prepare the system and install the MongoDB PHP library.

1. Install the system manager modules PHP (PEAR), the PHP development libraries and library libpcre3-dev.

   ```
sudo apt-get install php-pear php5-dev libpcre3-dev
   
   This step is necessary to install later MongoDB libraries for PHP. You may apt-get install additional libraries. This is not a problem.
   ```

2. Install MongoDB for PHP with PEAR package manager:

   ```
sudo pecl install mongodb
   
   If the process is completed, it will indicate the next step:
   
   You should add "extension=mongodb.so" to php.ini
   ```

3. Open the php.ini file and edit it. By default usually one for the command line (CLI) and one for Apache in the following PATH
If we want to establish connection from a PHP environment, we can do it by using the next code snippet:

```php
$host = "mongodb-rdlab.lsi.upc.edu";
$username = "<username>";
$password = "<password>";
$database = "<database>";

$manager = new MongoDB\Driver\Manager("mongodb://$username:$password@$host:27017/$database");

$query = new MongoDB\Driver\Query(array(), array());
$rows = $manager->executeQuery("$database.system.users", $query);

foreach($rows as $r){
    print_r($r);
}
```

If it works, running the script will produce the following output:

```
stdClass Object
(
    [id] => MongoDB\BSON\ObjectID Object
        (oid) => orh9qufhsdkfakfiasfhkjff
    [user] => <username>
    [readOnly] =>
    [pwd] => 9847ifhif9238rf923ry9fisdhf938yr
)`
5. **Java connection example**

To establish connection from a java project, it is necessary to download the driver mongo-java-driver-2.10.1.jar, add it to the CLASSPATH and import it with the commands:

```java
import com.mongodb.MongoClient;
import com.mongodb.MongoException;
import com.mongodb.WriteConcern;
import com.mongodb.DB;
import com.mongodb.DBCollection;
import com.mongodb.BasicDBObject;
import com.mongodbDBObject;
import com.mongodb.DBCursor;
import com.mongodb.ServerAddress;
```

Then, execute this snippet to connect:

```java
String server = "mongodb-rdlab.lsi.upc.edu";
String username = "<username>";
String password = "<password>";
String database = "<database>";

MongoClient mongoClient = new MongoClient(server);
DB db = mongoClient.getDB(database);
boolean auth = db.authenticate(username,
password.toCharArray());
```

In order to know if it has worked correctly, we can try to list our collections:

```java
Set<String> colls = db.getCollectionNames();
for (String s : colls) {
    System.out.println(s);
}
```

6. **Links**

1. **mongoDB manual**:  
   [http://docs.mongodb.org/manual/](http://docs.mongodb.org/manual/)

2. **mongoDB connection from PHP**:  
3. MongoDB connection from Java:
   http://docs.mongodb.org/ecosystem/drivers/java/