

To create and manage the database, you need a MongoDB environment. Here's how to set it up and create the database step by step:

Step 1: Install MongoDB

1. Option 1: Install MongoDB Locally

- Download and install MongoDB from the [official MongoDB website](#).

After installation, start the MongoDB service:

```
mongod
```

○

2. Option 2: Use MongoDB Atlas (Cloud-Based Solution)

- Create a free account on [MongoDB Atlas](#).
- Set up a free cluster.

Obtain the connection string for your database (it will look like this):

```
mongodb+srv://<username>:<password>@cluster0.mongodb.net/<databaseName>?retryWrites=true&w=majority
```

○

Step 2: Use a MongoDB Client

You can interact with MongoDB in several ways:

1. **Mongo Shell** (Command-line interface)
2. **MongoDB Compass** (GUI for MongoDB)
3. **Programming Language** (e.g., Node.js, Python)

We'll focus on using Node.js for building your backend.

Step 3: Set Up Your Project

1. **Install Node.js** (if not already installed): [Download here](#).

Initialize a Node.js Project:

```
mkdir candidate-management  
cd candidate-management  
npm init -y
```

2.

Install Required Packages:

```
npm install mongodb
```

3.

Step 4: Create the Database

Here's how you can create the database and collections programmatically:

Example Code to Create Database and Collections

```
const { MongoClient } = require('mongodb');  
  
// MongoDB connection string  
const uri =  
'mongodb+srv://<username>:<password>@cluster0.mongodb.net/candidateDB?retryWrites=true&w=majority';  
  
// Connect to MongoDB  
async function main() {  
  const client = new MongoClient(uri);  
  
  try {  
    // Connect to the database  
    await client.connect();  
    console.log('Connected to MongoDB!');  
  
    // Create or select database  
    const database = client.db('candidateDB');  
  
    // Create collections (optional, MongoDB creates them automatically if they don't exist)  
    await database.createCollection('candidates');  
    await database.createCollection('documents');  
    console.log('Collections created!');
```

```
// Example of inserting a candidate document
const candidatesCollection = database.collection('candidates');
const result = await candidatesCollection.insertOne({
  personalInformation: {
    name: 'John Doe',
    email: 'john.doe@example.com',
    phone: '+1234567890',
  },
  education: {
    masters: {
      institution: 'XYZ University',
      program: 'M.Tech',
      branch: 'AI',
    },
  },
});

console.log(`Candidate inserted with ID: ${result.insertedId}`);
} catch (err) {
  console.error('Error connecting to MongoDB:', err);
} finally {
  // Close the connection
  await client.close();
}
}

main();
```

Step 5: Verify the Database

1. If Using MongoDB Compass:

- Open MongoDB Compass.
- Connect using the same connection string.
- Check for the **candidateDB** database and its **candidates** and **documents** collections.

If Using Mongo Shell:

```
mongo
use candidateDB
show collections
```

```
db.candidates.find().pretty()
```

2.

Step 6: Manage Documents

- **Insert Candidates:** Use `insertOne` or `insertMany` methods.
 - **Query Candidates:** Use `find` or `findOne`.
 - **Store Documents:** Save file paths in the `documents` collection and store files in a file storage solution (e.g., AWS S3 or local server).
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If you want code for specific operations (e.g., file uploads or advanced queries), let me know!