

## **CS 319-1 Group 8**

### **Final Report**

### **Bilkent Tanıtım Ofisi Management System**

Short-name: BILFO

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## 1. Build Instructions

### Prerequisites

- Node.js and npm (For react frontend)
- Java JDK 17 or higher
- MongoDB (v6.0 or higher)
- Maven (often comes with Spring Boot projects, part of IntelliJ/Eclipse IDE)
- Git

### 1.1 MongoDB Setup

#### Install MongoDB:

- Visit MongoDB Download Center
- Download MongoDB Community Server for your OS
- Follow the installation wizard
- For Windows: Add MongoDB to your system PATH

#### Start MongoDB:

# Windows

```
mongod
```

# Linux/MacOS

```
sudo systemctl start mongod
```

#### Create Database:

```
mongosh
```

```
use bilfo
```

### 1.2 Project Setup

#### Clone the Repository:

```
git clone https://github.com/uzaykuzey/Bilfo.git
```

```
cd Bilfo
```

### 1.3 Backend Setup

#### Navigate to Backend Directory:

```
cd Backend
```

#### Create .env File:

Create a new file named .env in the Backend directory with the following content:

```
MONGO_DATABASE="database_name"
MONGO_USER="your_username"
MONGO_PASSWORD="your_password"
MONGO_CLUSTER="cluster_name"
MAIL_USERNAME = "mail_username"
MAIL_PASSWORD = "mail_api_password"
```

#### Install Dependencies and Build:

```
mvn clean install
```

#### Run the Backend:

```
mvn spring-boot:run
```

The backend should now be running on <http://localhost:8080>

### 1.4 Frontend Setup

#### Navigate to Frontend Directory:

```
cd ../Frontend
```

#### Install Dependencies:

```
npm install
```

#### Run the Frontend:

```
npm start
```

The frontend should now be running on <http://localhost:3000>

### 1.5 About the “highschools.txt”

We currently get the lists of all high schools along with their admission data from the <https://yokatlas.yok.gov.tr/lisans-univ.php> page. The list must be updated after each Yök Atlas version. Currently, it is based on 2024 admissions data. The “highschools.txt” is written by calling the YokAtlasScraper.java. Since this file is quite long and it is lengthy to run, we did not include it in our github repository.

But a small version can be created by creating a new “highschools.txt” in the backend, in the resources folder.

A sample content is:

```
ANKARA TÜRK TELEKOM SOSYAL BİLİMLER LİSESİ; ANKARA; ÇANKAYA; 1; 54
ANKARA ÖZEL TEVFİK FİKRET ANADOLU LİSESİ; ANKARA; ÇANKAYA; 12; 66
ANKARA ÜNİVERSİTESİ GELİŞTİRME VAKFI OKULLARI ÖZEL ANADOLU LİSESİ; ANKARA; ÇANKAYA; 5; 64
ÖZEL NESLİN FEN LİSESİ; AKSARAY; MERKEZ; 0; 1
ÖZEL NESİBE AYDIN ANADOLU LİSESİ; ANKARA; GÖLBAŞI; 3; 53
ÖZEL NESİBE AYDIN FEN LİSESİ; ANKARA; GÖLBAŞI; 5; 48
ÖZEL SEYİT ATEŞ SPOR LİSESİ; İSTANBUL; SULTANGAZİ; 0; 2
ÖZEL SEZİN LİSESİ; İSTANBUL; ÇEKMEKÖY; 2; 58
```

## 1.6 About chromedriver.exe

A valid chromedriver.exe executable should be added to the resources folder for Yökatlas parsing system.

## 1.7 Verification

Check MongoDB Connection:

- Open MongoDB Compass or mongosh
- Verify connection
- Check if collections are created

Access the Application:

Open your browser and navigate to <http://localhost:3000>

You should see the Bilfo application interface

## 1.8 Common Issues and Solutions

MongoDB Connection Issues:

- Verify MongoDB service is running
- Check MongoDB connection string in .env
- Ensure MongoDB port (27017) is not blocked

Backend Build Failures:

- Verify Java version compatibility
- Check Maven configuration
- Ensure all dependencies are properly resolved

Frontend Build Issues:

- Clear npm cache: `npm cache clean --force`
- Delete `node_modules` and run `npm install` again
- Check Node.js version compatibility

Additional Notes

- The application uses port 8080 for backend and 3000 for frontend. Ensure these ports are available
- For production deployment, update the environment variables accordingly
- Make sure to never commit the .env files to version control

For more detailed information about the project and the necessary files like .env, highschool.txt, or chromedriver.exe, connect with us through our group slack channel or through [bilfosystem@gmail.com](mailto:bilfosystem@gmail.com).

## 2. Work Allocation

### 2.1 Ata Uzay Kuzey

- Worked on the database.
- Co-worked on deliverable 2.
- Co-worked on deliverable 1&2 final.
- Worked on deliverable 3 diagram.
- Wrote almost all of the manager classes in Backend.
- Wrote almost all of the service classes in Backend.
- Wrote almost all of the entity classes in Backend.

### 2.2 Kerem Demirören

- Worked on deliverable 4 first iteration to add design patterns.
- Co-worked on deliverable 4 final, created the updated detailed class diagram.
- Acted as a frontend developer, edited all .css files to style all our pages and popups.

### 2.3 Emir Görgülü

- Worked on deliverable 3 diagrams.
- Worked on the database.
- Did the initial commit on our backend.
- Started and created most of our .js files.
- Worked extensively on the tour/fairs list in frontend.

### 2.4 Duru Solakoğlu

- Drew state diagrams
- Worked on initial deliverable 4 texts.
- Minor updates on the frontend.

### 2.5 Nazlı Apaydın

- Co-worked on deliverable 1&2.
- Co-worked on deliverable 1&2 final.
- Co-worked on deliverable 3 and 4 diagrams.
- Wrote deliverable 3 final.

- Co-worked on deliverable 4 final, created the class diagram for the frontend.
- Wrote the YokAtlas scraping class for the High Schools list.
- Integrated JWT tokens for security,