Find Me a Job

Justin Chin
Ryan Baten
Zaid Alali

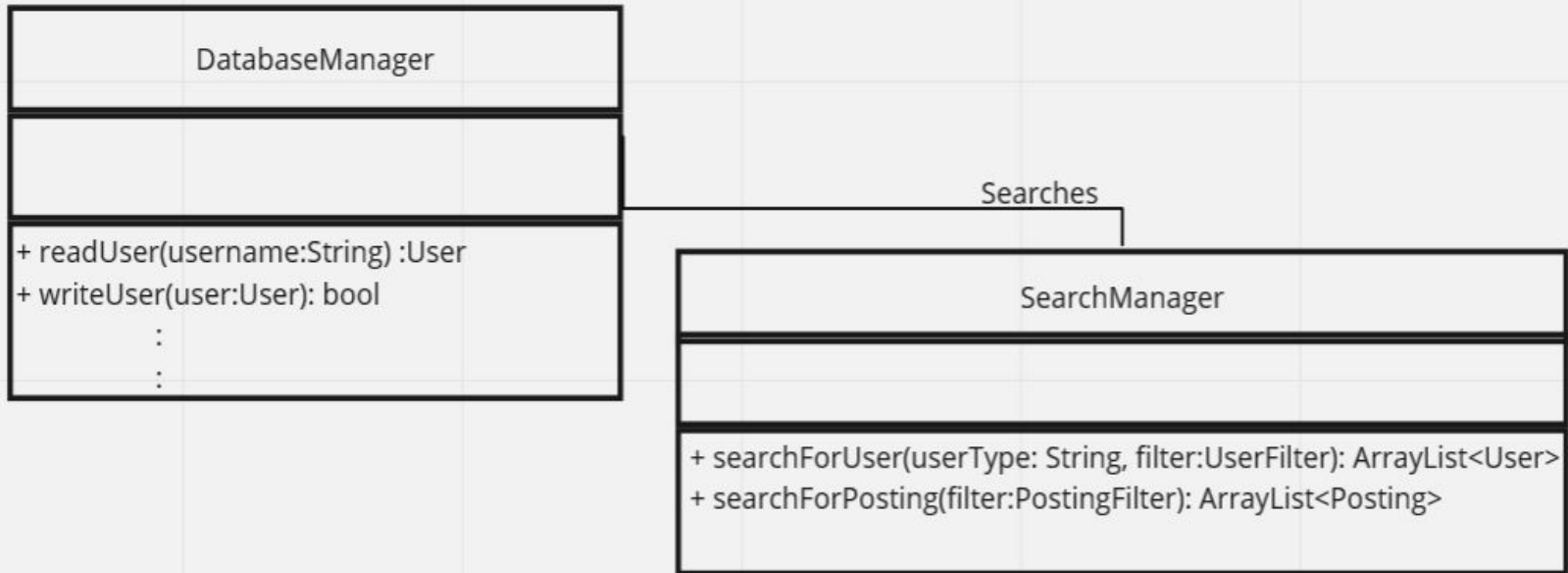# Application?

Find Me A Job

Major Use Cases

- Recruiter wants to send a job listing to a job seeker.
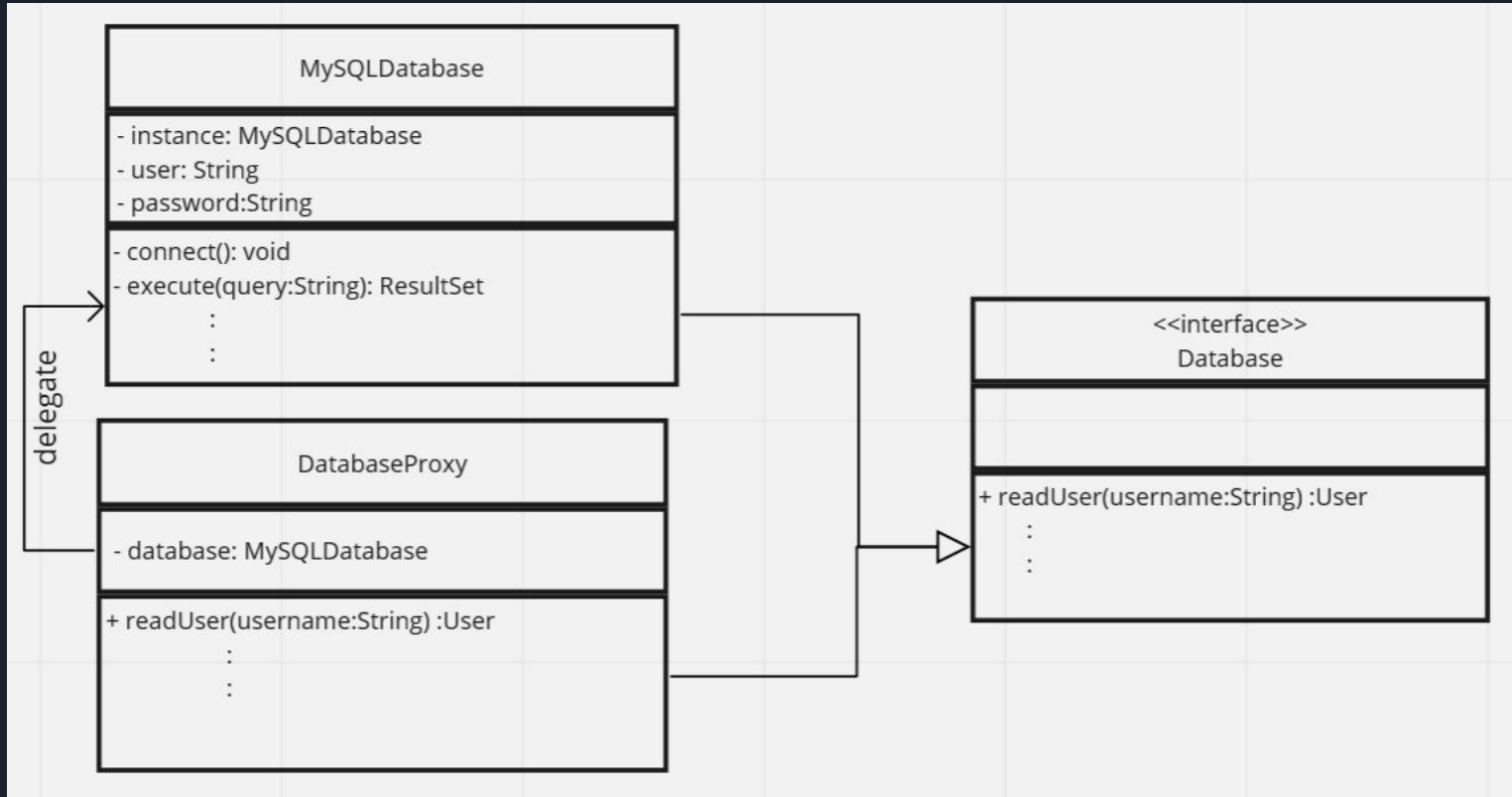- Job seeker finds a job listing and applies to it.

Design Patterns Used

- We used the following design patterns in our project:
  - Proxy
  - Factory
  - Singleton

Database Before Refactoring

DatabaseManager

+ readUser(username:String) :User
+ writeUser(user:User): bool
:
:

Searches

SearchManager

+ searchForUser(userType: String, filter:UserFilter): ArrayList<User>
+ searchForPosting(filter:PostingFilter): ArrayList<Posting>

Database After Refactoring (Proxy)

MySQLDatabase

- instance: MySQLDatabase
- user: String
- password:String

- connect(): void
- execute(query:String): ResultSet
              :
              :

DatabaseProxy

- database: MySQLDatabase

+ readUser(username:String) :User
              :
              :

<<interface>>
Database

+ readUser(username:String) :User
              :
              :

delegate

Highlight of Proxy Pattern

```java
import java.util.ArrayList;

public class DatabaseProxy implements Database {
        private MySQLDatabase database;

        public DatabaseProxy() {
                database = MySQLDatabase.getInstance();
        }
        public User readUser(String username) {
                return database.readUser(username);
        }
        public boolean writeUser(User user) {
                return database.writeUser(user);
        }
        public boolean deleteUser(String username) {
                return database.deleteUser(username);
        }
        public boolean updateUser(String username, User user) {
                return database.updateUser(username, user);
```

Highlight of Proxy Pattern

To switch Databases, only change these!

```java
import java.util.ArrayList;

public class DatabaseProxy implements Database {
    private MySQLDatabase database;

    public DatabaseProxy() {
        database = MySQLDatabase.getInstance();
    }

    public User readUser(String username) {
        return database.readUser(username);
    }
    public boolean writeUser(User user) {
        return database.writeUser(user);
    }
    public boolean deleteUser(String username) {
        return database.deleteUser(username);
    }
    public boolean updateUser(String username, User user) {
        return database.updateUser(username, user);
```
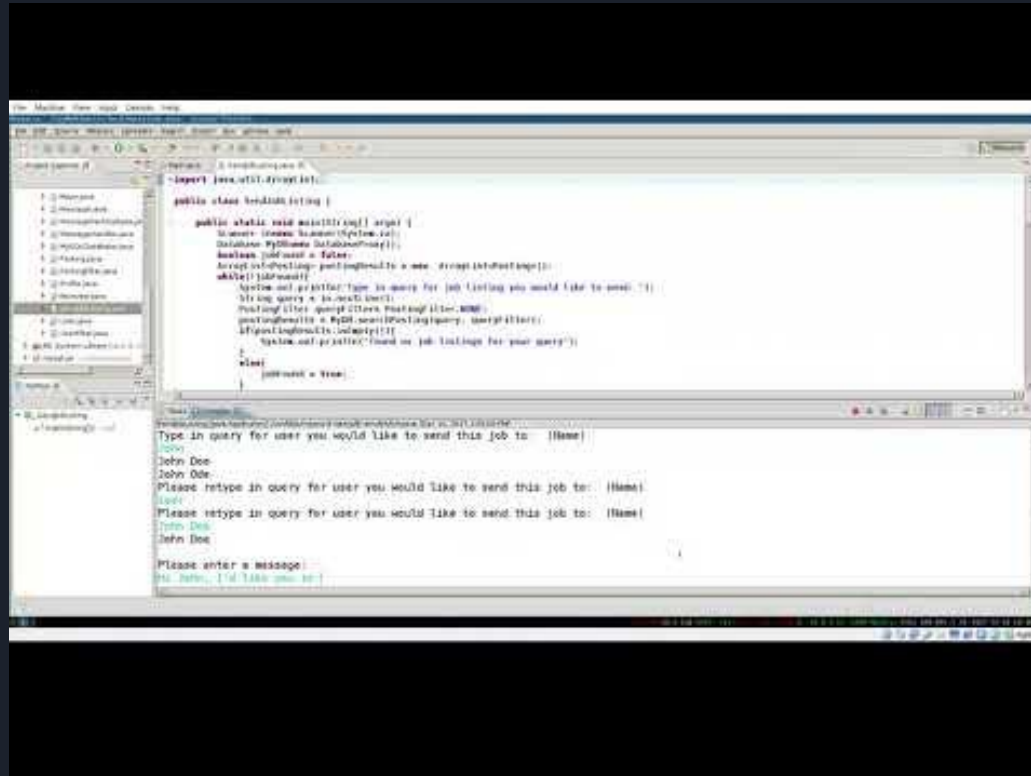
Application Demo

https://www.youtube.com/watch?v=sAdTNCNnD5Y