**Word Matching Game**

A real-time multiplayer word game where players compete to find valid words within a grid of letters. The game is built using Java Swing, Multithreading, Networking, and JDBC for database integration with MySQL.

Project Structure

* src  
  + Client.java
  + Server.java
  + DatabaseHandler.java
  + dictionary.txt
* lib  
  + mysql-connector-j-9.2.0.jar
* README.md

Features

* Multiplayer word-matching game using Java Socket Programming
* Real-time timer and score tracking
* MySQL integration for player authentication and leaderboard storage
* Interactive GUI using Java Swing
* Validates words using a predefined dictionary file

Requirements

* Java 11 or later
* MySQL Server installed and running
* MySQL Connector JAR (included in lib/)

Setup Instructions

1. Clone the repository or download the source code
2. Install MySQL and create a database named wordgame
3. Update the database credentials in DatabaseHandler.java
4. Ensure mysql-connector-j-9.2.0.jar is included in the classpath

Compiling and Running

Windows

1. Open Command Prompt in the project directory
2. Compile the source files  
    javac -cp "lib/*;src/" -d bin src/*.java
3. Start the server  
    java -cp "lib/\*;bin/" Server
4. Open a new terminal and start a client  
    java -cp "lib/\*;bin/" Client

Mac

1. Open Terminal in the project directory
2. Compile the source files  
    javac -cp "lib/*:src/" -d bin src/*.java
3. Start the server  
    java -cp "lib/\*:bin/" Server
4. Open a new terminal and start a client  
    java -cp "lib/\*:bin/" Client

Database Setup

1. Start MySQL Server
2. Run the following commands to create the database and tables  
    mysql -u root -p  
    CREATE DATABASE wordgame;  
    USE wordgame;  
    Tables are automatically created by the DatabaseHandler.java file

How to Play

* Enter your name to join the game
* Find words using the given letter grid
* Submit words to earn points
* The player with the highest score at the end wins

Troubleshooting

* If you get a ClassNotFoundException for MySQL Driver, ensure the JAR file is correctly placed in the lib/ folder and included in the classpath
* If MySQL is not connecting, verify that the server is running and the credentials in DatabaseHandler.java are correct
* If the dictionary file is missing, ensure dictionary.txt is in the src/ folder

License

This project is for educational purposes and is open-source.

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