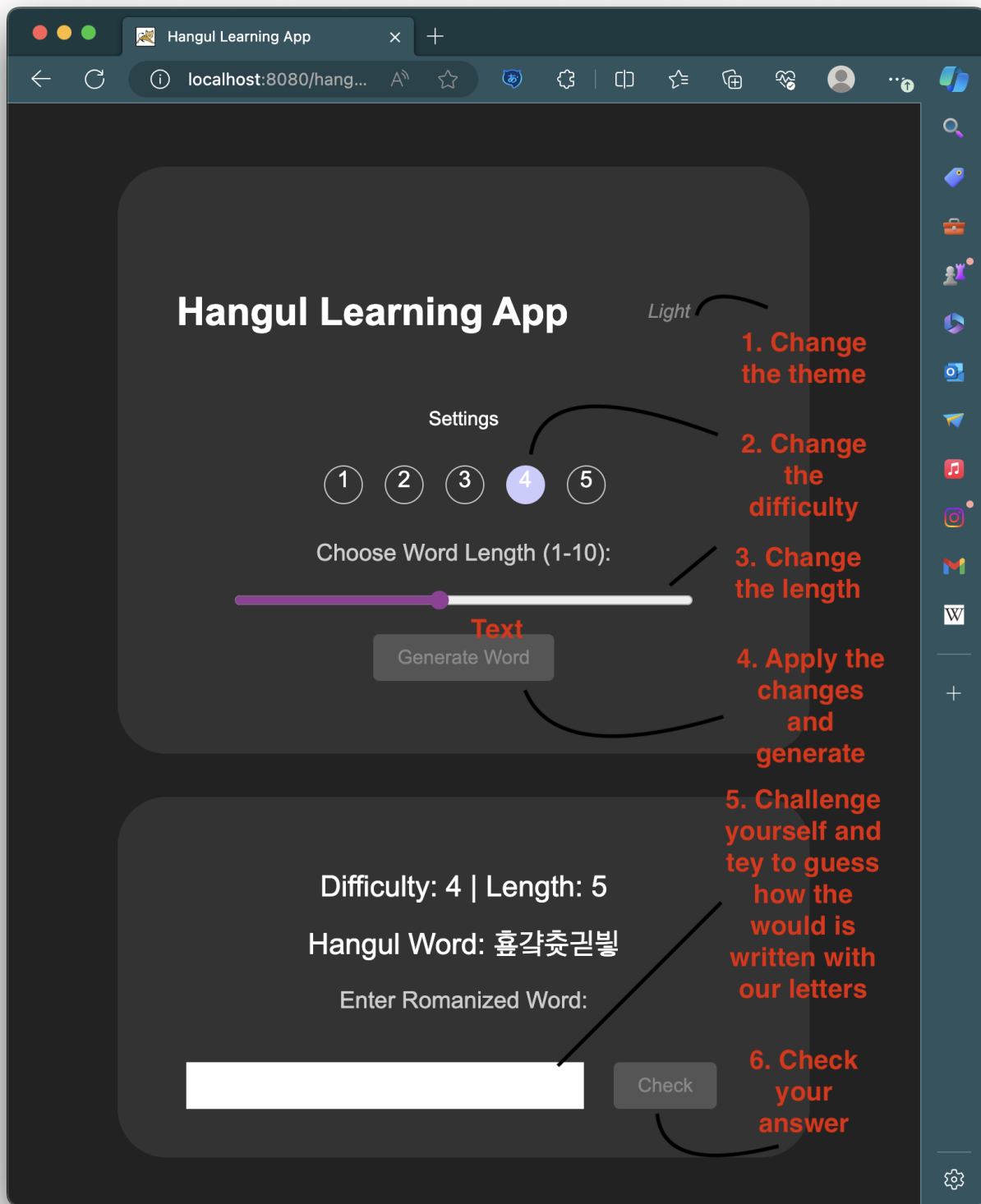


README.md

Hangul Learning App

Introduction



*Correction: how the would → how the word

This project is a Hangul learning application that helps users practice and enhance their understanding of the Korean script. The app generates random Hangul words based on user-defined settings, providing an interactive learning experience. The application consists of a Flask backend for word generation and a Java Servlet frontend for handling user interactions.

Documentation

- [README.md](#)
- [USER-GUIDE.md](#)
- [PYTHON.md](#)
- [JAVA-SERVLET.md](#)
- [HTML-CSS-JS.md](#)

Features

- Generate random Hangul words with customizable difficulty levels.
- Romanize Hangul words for pronunciation practice.
- User-friendly web interface for an interactive learning experience.
- Log generated words and user attempts for future analysis.

More on [USER-GUIDE.md](#)

Project Structure

```
.
├── .vscode
│   └── settings.json
├── HTML-CSS-JS.md -- HTML-CSS-JS Doc
├── JAVA-SERVLET.md -- JAVA-SERVLET Doc
├── LICENSE
├── PYTHON.md -- PYTHON Doc
├── README.md -- READ-ME Doc
├── USER-GUIDE.md -- USER-GUIDE Doc
├── WEB-INF
│   ├── classes
│   │   ├── HangulServlet.class -- Java servlet class file
│   │   └── word_logs.csv -- Logs
│   ├── lib
│   │   └── servlet-api.jar -- Servlet api (you still need to link yours)
│   └── web.xml -- Servlet Mapping
├── hangulLearning.js -- JavaScript
├── index.jsp -- Home page (index.jsp)
├── src -- Sources
│   ├── HangulServlet.java -- Java Servlet source code
│   ├── scripts -- python scripts
│   │   ├── .junk
│   │   │   ├── generator.py
│   │   │   ├── hangul_check.py
│   │   │   └── word_generator.py
│   ├── difficulty1.csv -- list of korean syllables
│   └── difficulty2.csv -- list of korean syllables
```

—	difficulty3.csv --	list of korean syllables
—	difficulty4.csv --	list of korean syllables
—	difficulty5.csv --	list of korean syllables
—	wordgenerator.py --	Python word generator API
—	styles.css	

Python API (Flask)

The python API is implemented in Python using Flask. This API is used for generating Hangul words with specified difficulty levels and lengths.

The server runs on <http://localhost:4848>.

Installation and Usage

1. Install required dependencies:

```
pip install flask pandas korean-romanizer
```

2. Run the Flask server:

```
python path/to/hangultrainer/src/sripts/wordgenerator.py
```

3. Access the API at http://localhost:4848/generate_word?length_word={length}&difficulty={difficulty}.

Java Servlet

The frontend is implemented using Java Servlets. It communicates with the Flask backend to generate Hangul words, retrieve Romanized versions, and log user attempts.

Prerequisites

- Java Servlet environment (e.g., Apache Tomcat)

Configuration

1. Update the Flask API endpoint in [HangulServlet.java](#) to match your Flask server. (default: <http://localhost:4848>)
2. Deploy the Servlet to your Servlet container.

More on [JAVA-SERVLET.md](#)

Web Interface

The web interface provides a user-friendly platform for users to interact with the Hangul learning application. It includes settings for difficulty levels, word length selection, and an interactive display for learning and testing.

More in [HTML-CSS-JAVASCRIPT.md](#)

Usage

1. Access the app at `http://localhost:{your_servlet_port}/HangulServlet?length_slider={length}&difficulty={difficulty}`.
2. Configure the settings using the provided controls for length and difficulty.
3. Choose your preferred theme with the button Dark/Light
4. Click the "Generate Word" button to generate a random Hangul word.
5. Enter the Romanized translation in the input field and click "Check" to verify your answer. A pop-up will tell if the input is correct or incorrect.

Logs

User attempts and generated words are logged in the `word_logs.csv` file located in the `WEB-INF/classes` directory. The log includes the length, difficulty, and timestamp of each attempt.

Version History

- **Version 1.2:** Improved user interface, added dark and white mode, and enhanced overall graphical design.
- **Version 1.1:** Implemented word logging and difficulty parameter.
- **Version 1.0:** Initial release with the possibility to only set the length.

Contributors

- [Rolando Mignone](#)

License

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