

# Data Collection and Display -- Language App

Using Cross-Platform Apps for Enhanced Learning

HIT238 Assessment 1

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# OVERVIEW OF THE PROJECT:

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BRIEFLY INTRODUCE THE PROJECT'S AIM AND ITS IMPORTANCE IN LANGUAGE LEARNING.



HIGHLIGHT THE KEY FUNCTIONALITIES OF THE LANGUAGE APP.

# KEY REQUIREMENTS:

## Add and Record Sentences:

- Allow users to add a sentence in text.
- Record the sentence and save the recording online with the name of the sentence.

## Teacher and Student Roles:

- Teachers record material for students.
- Students can practice sentences and play games based on the sentences.

## Storage:

- Initial storage in a JSON file.
- Future storage on Firebase.



# TYPES OF MOBILE APPLICATIONS:

## Cross-Platform Apps

### **Advantages:**

- One codebase to manage.
- Reasonable cost.
- Acceptable performance close to native apps.

### **Business Justification:**

- Cost and timeframe efficiency.
- Difficulty finding native developers.
- Suitable for apps not requiring high-level precision.



# DESIGN CONSIDERATIONS

## **UI/UX Design:**

- Importance of a responsive and intuitive interface.
- Examples of good UI/UX practices for language learning apps.

## **Functional Requirements:**

- Integrating recording and playback features.
- Enabling sentence-based games for learning reinforcement.





# TECHNOLOGY STACK

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## Programming Languages:

- JavaScript/Dart for Cross-platform development.
- Tools and frameworks (Flutter).

## Database and Storage:

- Initial storage in JSON file.
- Future storage on Firebase.

# CHALLENGES AND SOLUTIONS

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## **Potential Challenges:**

- Handling cross-platform compatibility issues.
- Ensuring performance optimization.
- Managing user data securely.

## **Proposed Solutions:**

- Regular testing across devices.
- Optimizing code and using efficient libraries.
- Implementing robust security measures.

# CONCLUSION

## Summary:

- Recap the importance of the language app project.
- Emphasize the benefits of using cross-platform development.

## Future Work:

- Possible enhancements and new features.
- Long-term maintenance and updates.

