



# **Bengali Braille to Text Translator**

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# Project Overview

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# Bengali Braille to Text Translator

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- Desktop Application
- Translate Bengali Braille Code to Corresponding Text
- Input ➡ Scanned Image of Bengali Braille Document

# Braille code of the Bengali Text

“আমার সোনার বাংলা”

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আ ম আ র

⏟

আমার

স ও ন আ র

স ও ন আ র

⏟

সোনার

ব আ ং ল আ

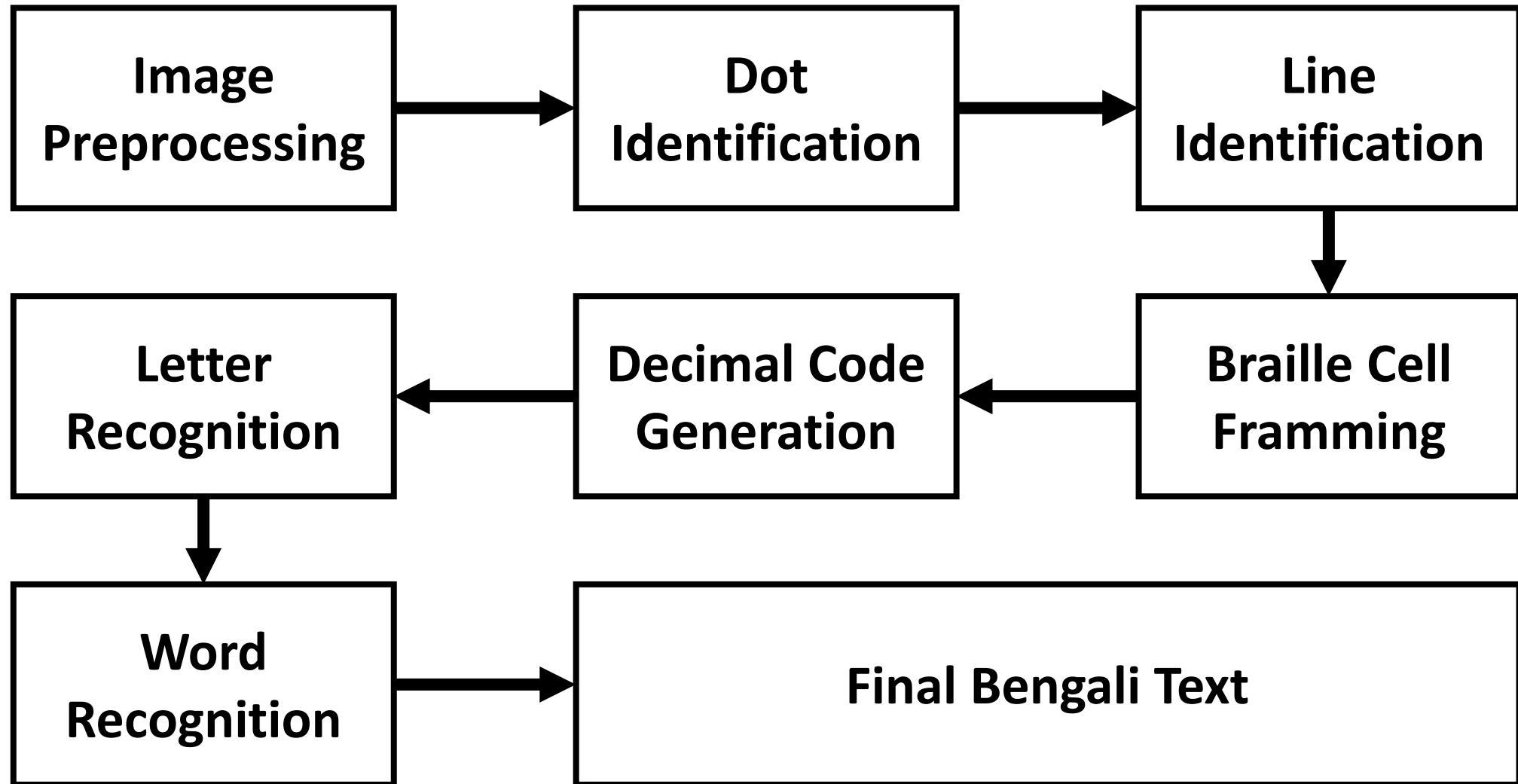
ব আ ং ল আ

⏟

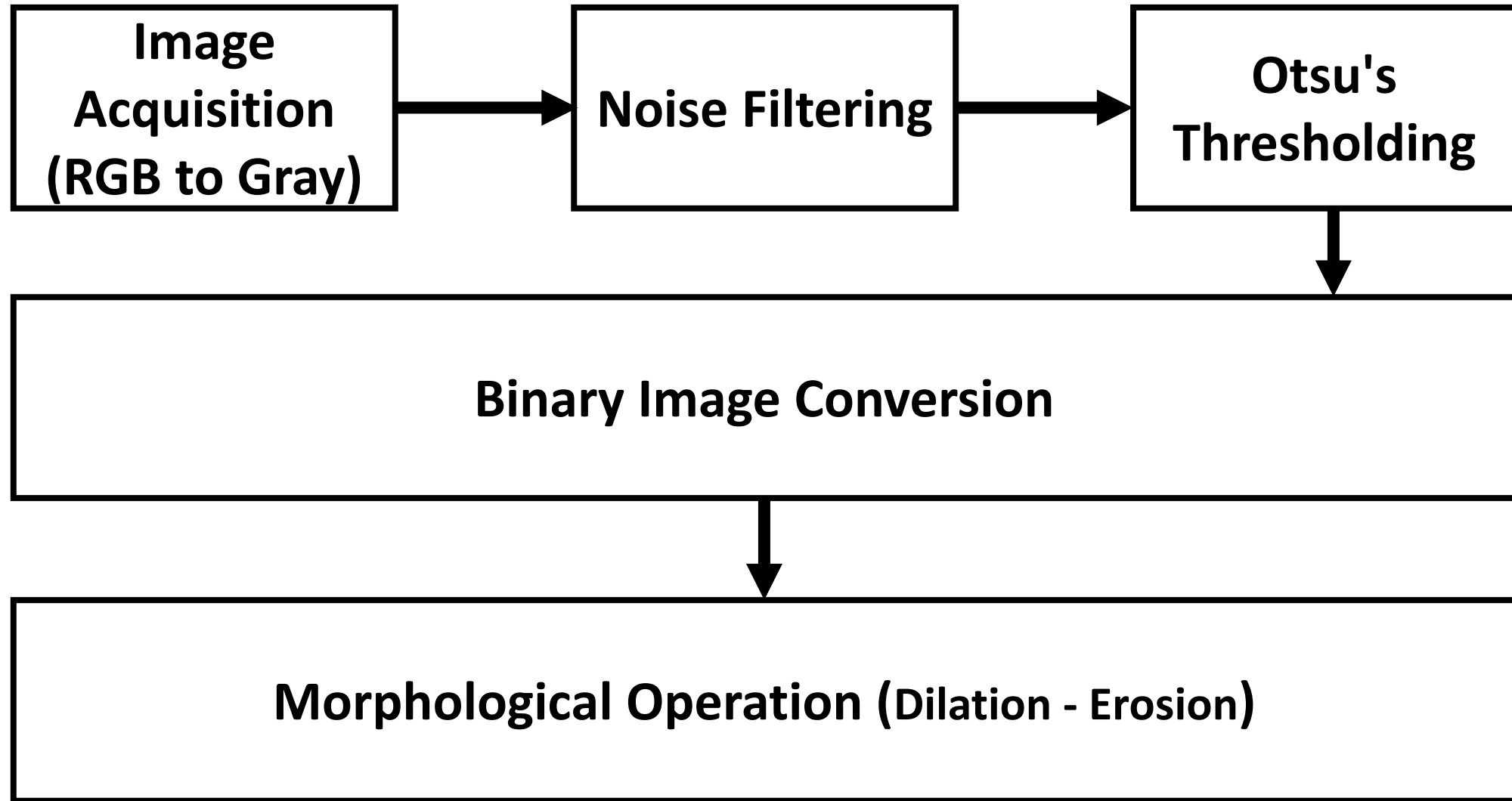
বাংলা

# Methodology

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# Image Preprocessing



## Example of Braille code and Bengali text

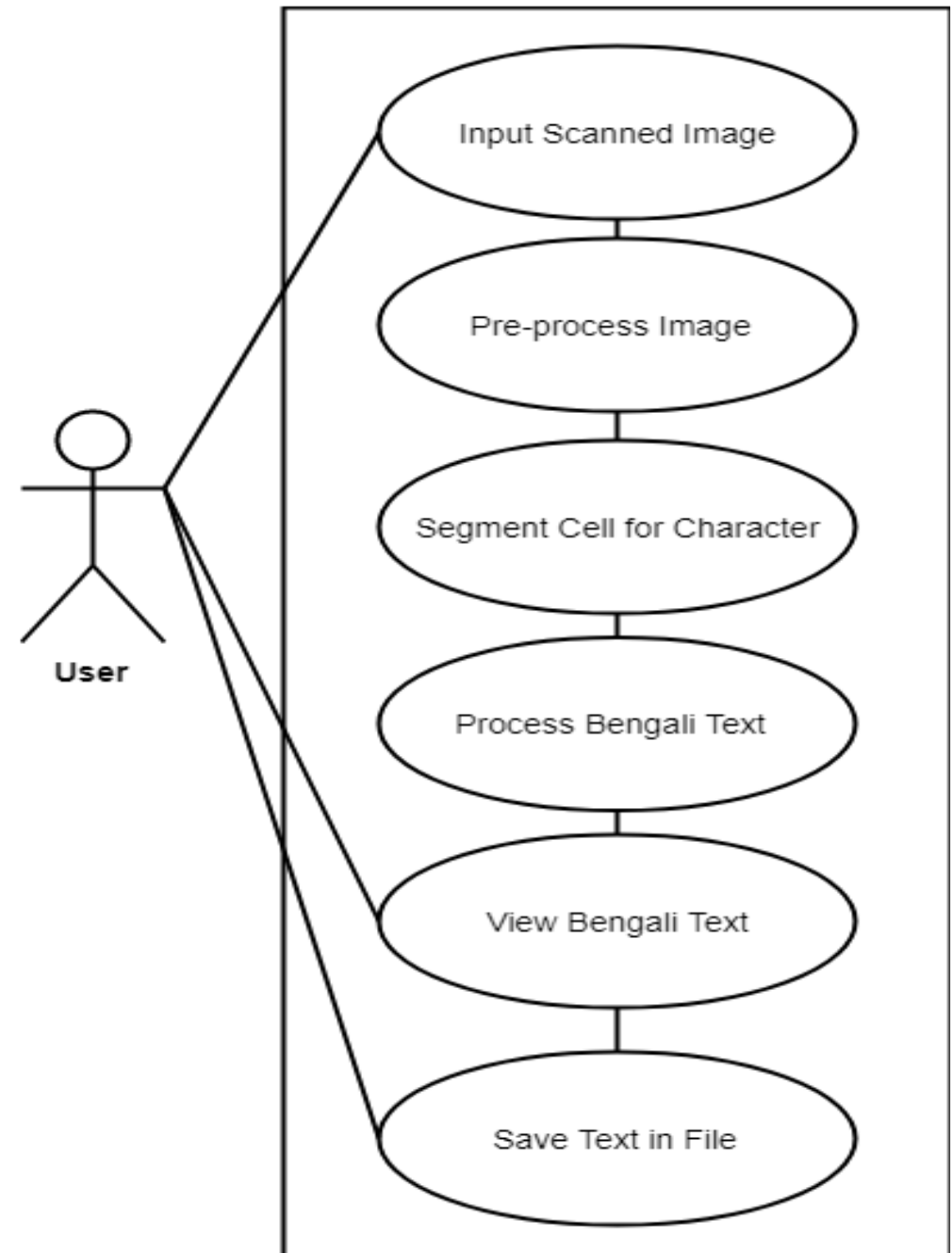
Bangla Word	Conjunct	Distribution	Braille Representation
কক্ষ	ক্ষ	ক ্ষ	
জ্ঞান	জ্ঞ	জ ্ ঞ	



Bangla Word	Conjunct	Distribution	Braille Representation
রাষ্ট্র	ঈ	ষ্ট্র	⠠⠠⠠⠠⠠⠠
স্বাতন্ত্র্য	ত্ৰ্য	নত্ৰ্য	⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠

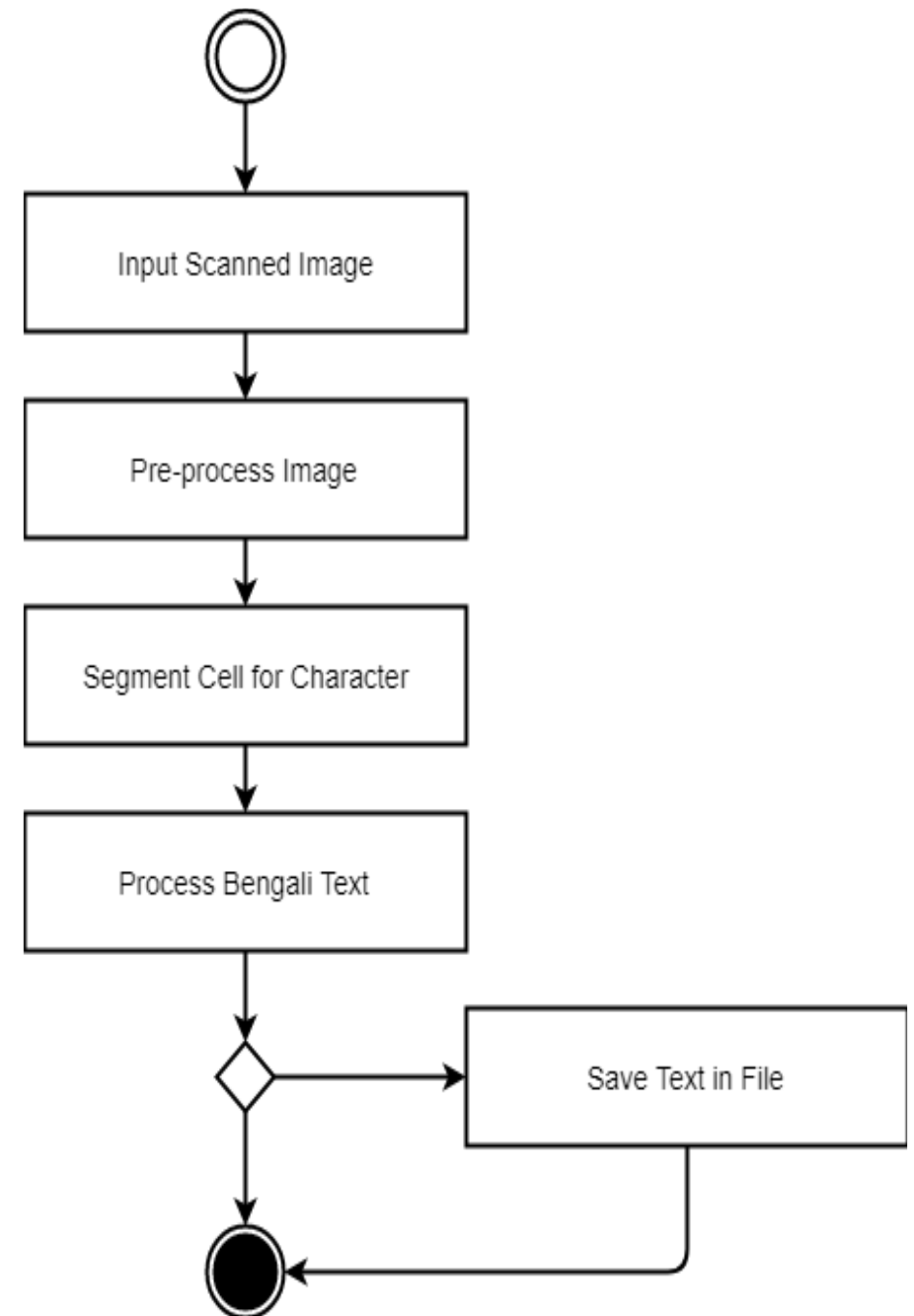
# Use Case Diagram 1.1

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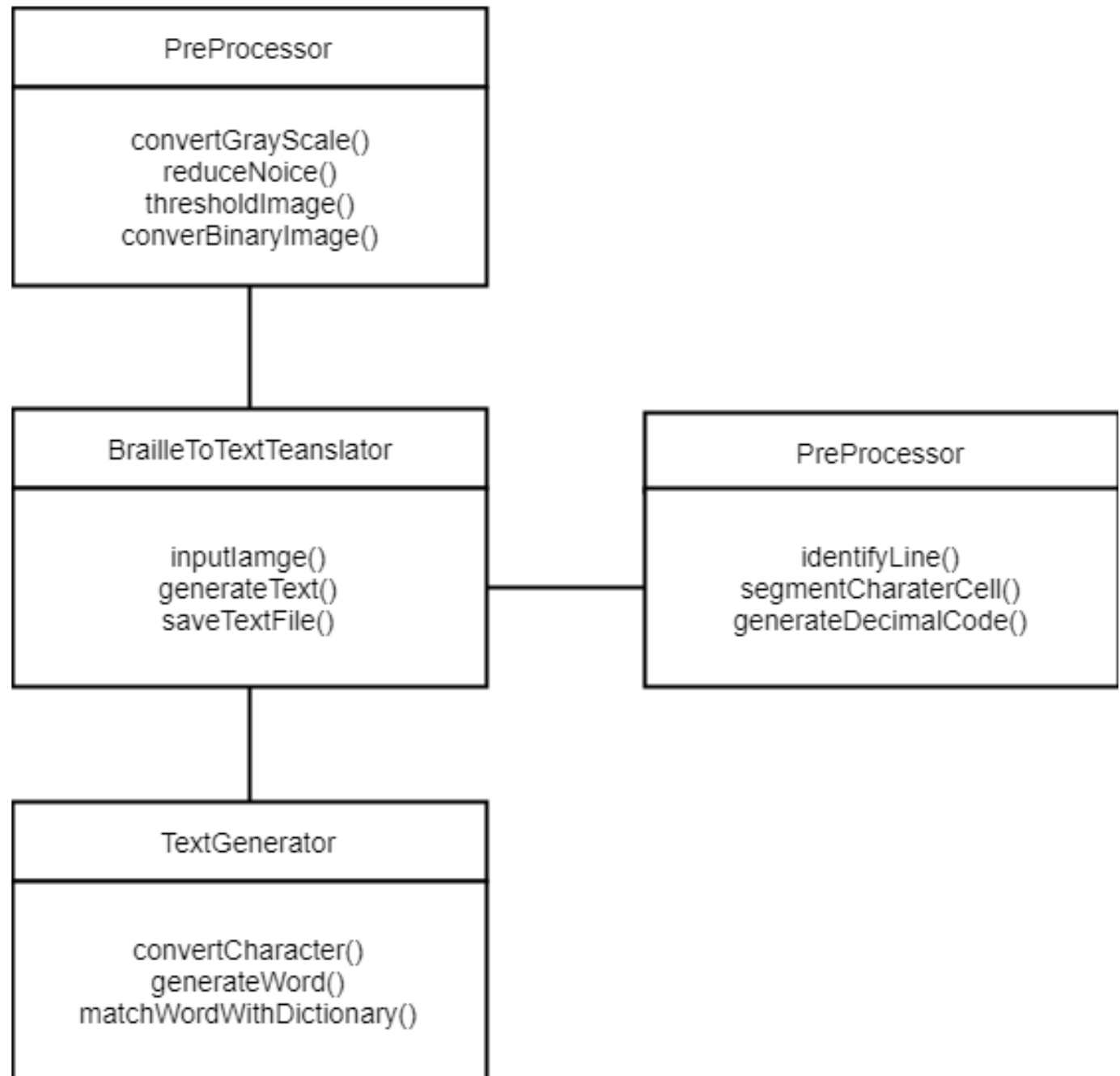


# Activity Diagram Level-1

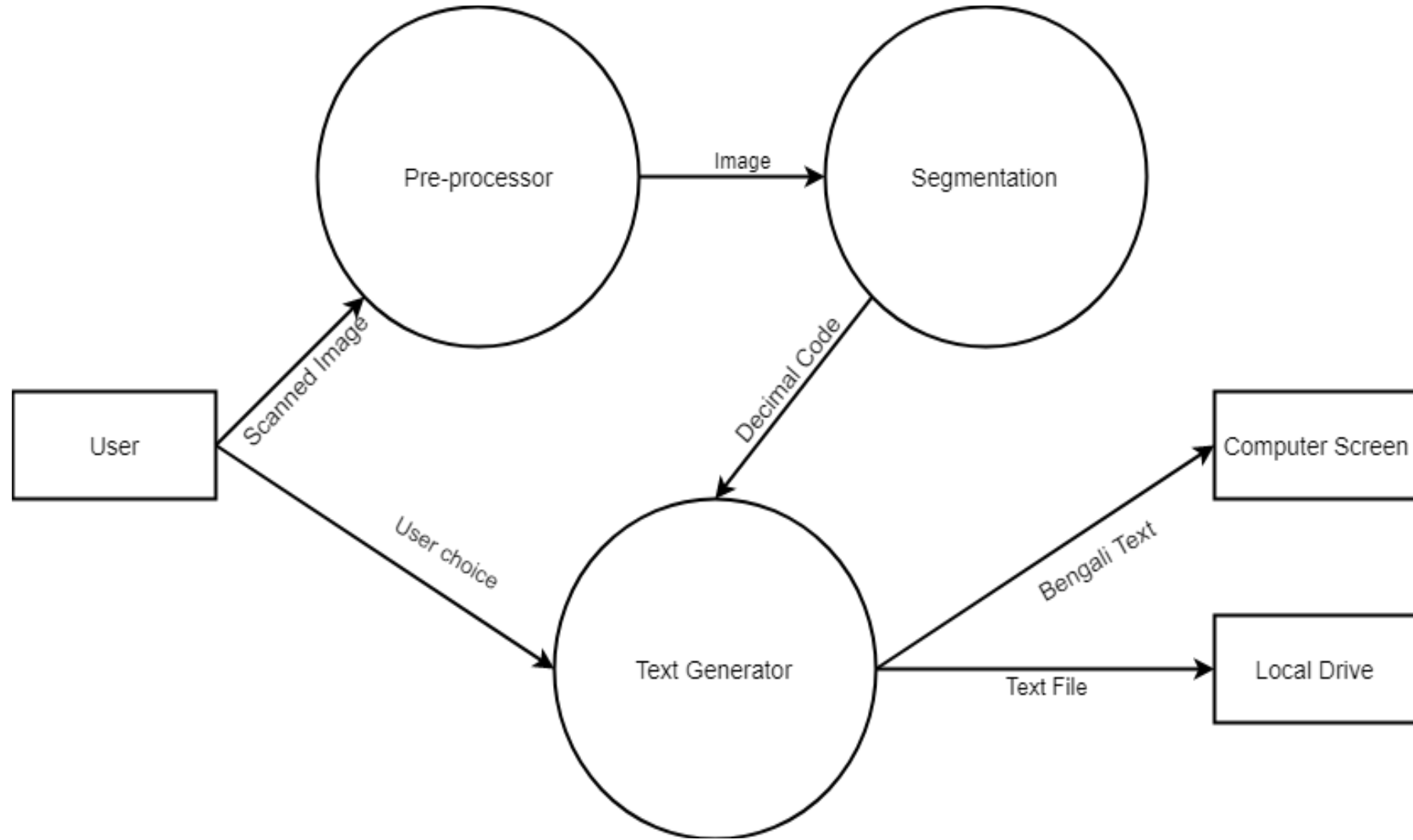
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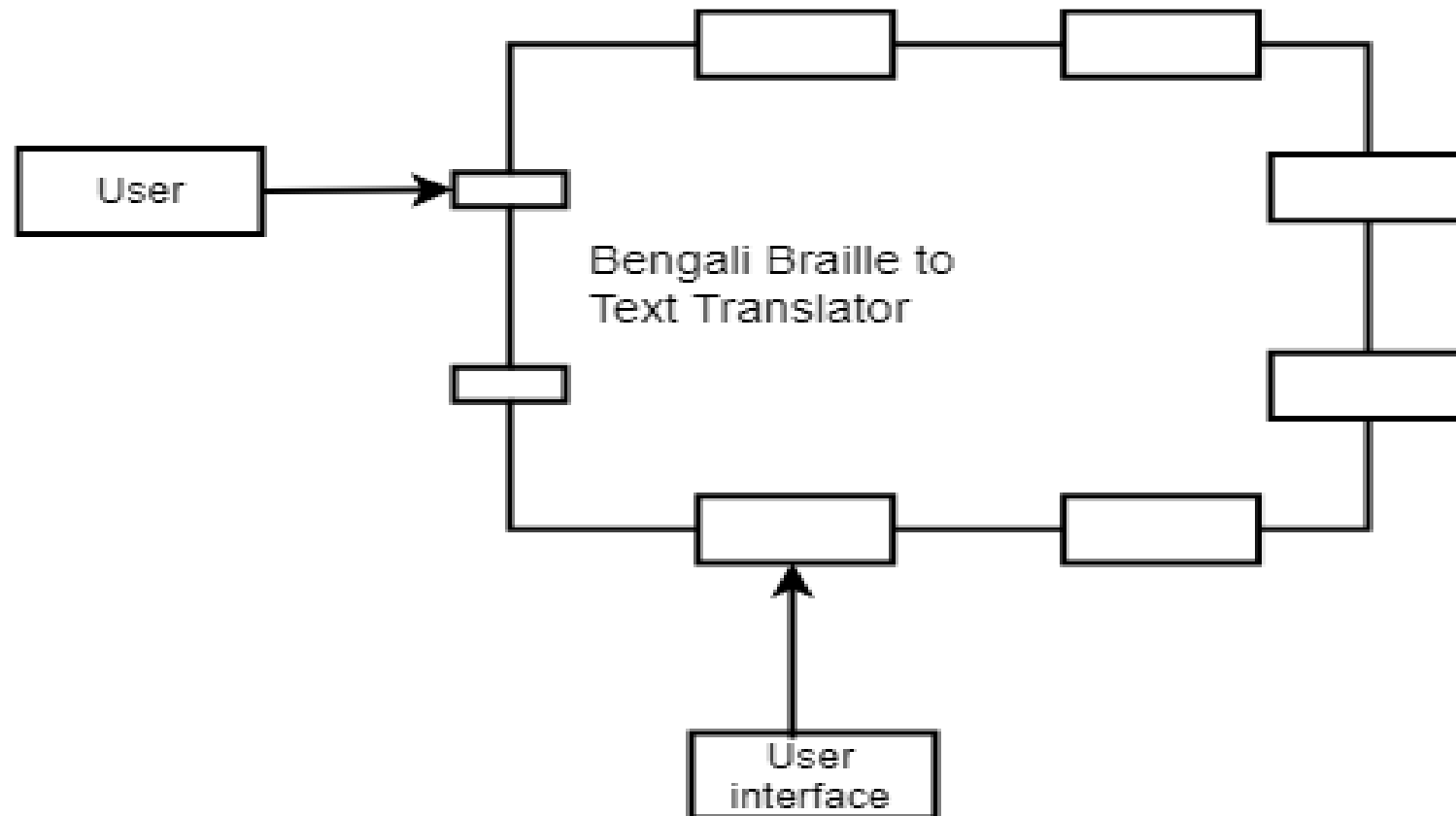
# Class Diagram



# Data Flow Diagram Level-1



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# Tools & Technologies

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# Backend

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# Frontend

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# Progress

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- Preprocessing
- Noise Reduction to Identify Dot

# References

- S. D. Al-Shamma, "Arabic Braille Recognition and Transcription into Text and Voice," *Cairo International Biomedical Engineering Conference*, p. 228, 2010.
- M. Gadag, "Generation of English Text from Scanned Braille Document," *International Journal of Engineering Science and Computing*, vol. 6, no. 4, p. 4447, 2016.
- S.Padmavathi, "CONVERSION OF BRAILLE TO TEXT IN ENGLISH, HINDI AND TAMIL LANGUAGES," *International Journal of Computer Science, Engineering and Applications*, vol. 3, no. 3, p. 25, 2013.

Q & A

Thank You