



SMART INDIA HACKATHON 2022

Ministry/Organization Name/Student Innovation: Department of School Education & Literacy (DoSEL), Ministry of Education.

PS Code: RK790

Problem Statement Title: Access to Education - education delivery for specially-abled students Innovations in improving the delivery of education to students with special needs to improve the learning outcome.

Team Name: GOGA

Team Leader Name: Dhruv Bansal

Institute Code (AISHE): U-0385

Institute Name: Thapar Institute Of Engineering & Technology

Theme Name: Miscellaneous

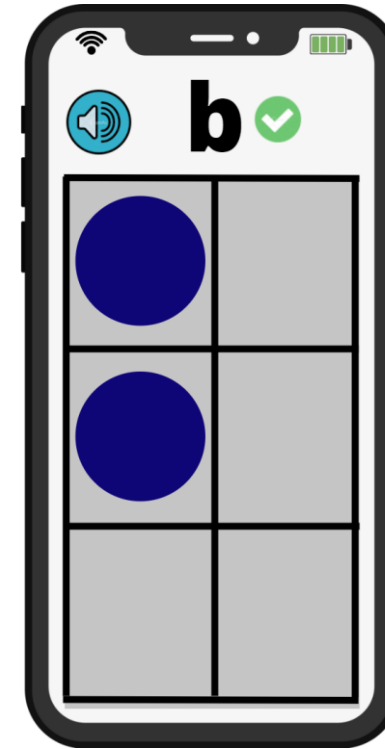
Idea/Approach Details

➤ Problems

- About 15 million blind people live in India. However, the **braille literacy rate is only 1%**
- Without braille education, the quality of life for visually impaired people declines significantly and their **employability options reduce**.

➤ Solution

- To develop an app that teaches **braille in multi-languages**.
- Provides **simulation of virtual braille keyboard** on your phone screen.
- Weekly, Monthly **progress trackers** and leader board for fun activities.
- Provides an effective way of **virtual learning** to the students



'b' written on braille keyboard of our app

Technology Stack



Automatic Speech Recognition



Flutter



Dart



Firebase



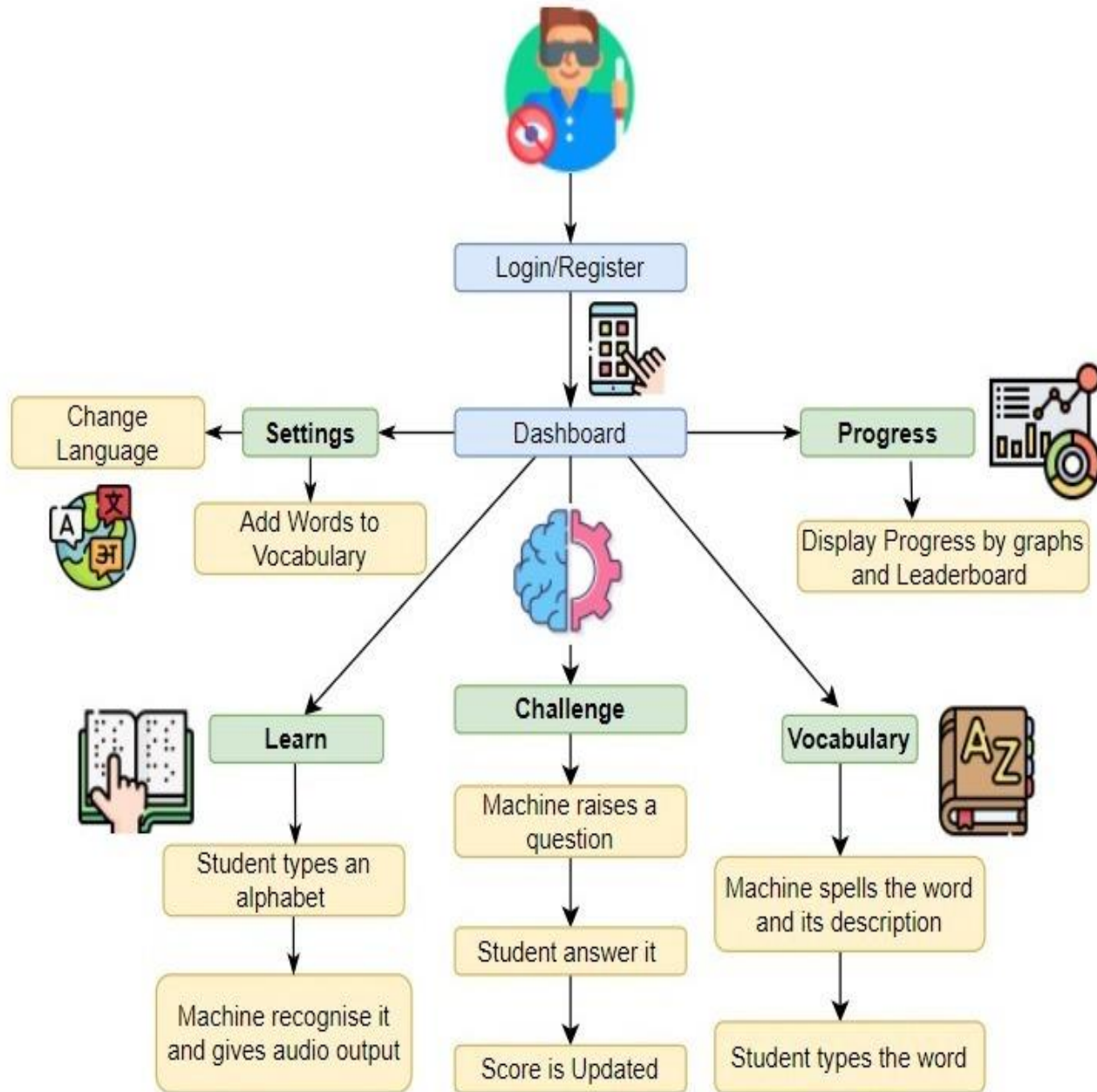
Natural Language Understanding



Scikit-Learn



Python



Show Stopper

- **Cost-efficient**
- **No hardware component is required.**
- **Can teach Braille without a personal trainer.**
- **Provides the convenience of remote learning.**
- **No prerequisite training is required.**
- **Personalized stats to measure progress.**

Use Cases

- **Act as an android braille keyboard.**
- **Self learning and assessment with help of voice bot.**
- **Progress tracking**
- **Act as an assessment tool by blind schools.**
- **Can be used to learn braille for multiple languages.**

Team Member Details

Team Leader Name: Dhruv Bansal

Branch - Btech	Stream - ENC	Year - III
----------------	--------------	------------

Team Member 1 Name: Madhav Bansal

Branch - Btech	Stream - COE	Year - III
----------------	--------------	------------

Team Member 2 Name: Shivangi Singla

Branch - Btech	Stream - COE	Year - III
----------------	--------------	------------

Team Member 3 Name: Mayukh Sharma

Branch - Btech	Stream - ENC	Year - III
----------------	--------------	------------

Team Member 4 Name: Yashul Tyagi

Branch - Btech	Stream - COE	Year - III
----------------	--------------	------------

Team Member 5 Name: Deepak Dangi

Branch - Btech	Stream - COE	Year - III
----------------	--------------	------------

Team Mentor 1 Name: Dr. Jasmeet Singh

Category – Academics	Expertise – ML/DL/NLP/Data Mining	Domain Experience – 10 Years
----------------------	-----------------------------------	------------------------------