Team Number/ Team Name	C1SE.05
Project title	LinguaSnap for Travelers
How many students are on your team? List the team member's name	4 Dat, Nguyen Thanh Kha, Nguyen Ngoc Truong, Vu Dinh Long, Pham Ba Hoang

Reflection (Required)

What challenges did you face while completing this project?

- New technology: This project required us to learn about new technologies such as Firebase authentication or Google's Text Regcognition services, although it does not affect much, this is also a common difficulty of the group in completing the project.

- Lack of communication: At first, we didn't know how to communicate with each other and our productivity wasn't good enough. But overtime, we got to know each other more and we started to improve.

- Lack of practical experience: Estimating workload depends heavily on the feelings and experiences of each individual

- Understanding of system intergration: Due to each person having different coding styles, we had a difficult time trying to intergrate the system.

What were the highlights for you/your team during this project?

- New technologies:
  - Firebase Authentication is a technology that provides real-time database and authentication services.
  - Google's Translation API provides translation services with the support of many languages.
  - Google's MLKit OCR API provides text extraction from images with 5 supported scripts: Latin, Devanagari, Korean, Chinese, Japanese
  - Grammar Bot API provides text correction services for grammar issues.
- After working for more than 3 months, we started to have positive changes of opinion, thinking, action. We start to think of other people and we are responsible for our work more.

- We have successfully used different technologies to create a fully working system that can help users with learning or traveling.

What is the most important thing you learned in this project?

- Teamwork and communication: This has always been an important thing when working with others. This project requires extensive teamwork, communication and commitment, that's why we had to adapt to this new experience.
- Task estimation: After going through this project, we have a better understanding and more accurate estimation of the time to complete the task, function scores,… Which can help us make project plans easier

- Problem solving and accountability: In order to keep up with project progress, each team member has the responsibility for their assigned work and instead of dealing with a big problem, we know how to divide small problems to handle them effectively.

What part of the project did you do your best work on?

Each team member will have strengths and they will do well in the following parts:

- Dat: Interface design for both Text Extraction and Translation pages, developed UI to be compatible on every device, worked on Text Extraction using Google's MLKit OCR API, researched and developed spell check algorithm along with Grammar Bot API to provide a grammatically correct text.
- Kha: Language translation with auto-detection using Google Cloud service, implementing REST API with HTTP request/GET on the Dictionary.
- Truong: Authetication of user accounts, data connection with realtime database, ensuring user security. read, write and output user data according to the user's session on the system.
- Long: Interface design for Login, Signup, Menu, Forgot Password, Change Password, Header

What was the most enjoyable part of this project?

- Planning activities: This is an activity that happens every Sprint starts. After the Product owner read each backlog, the team members asked to analyze and clarify this backlog. This is when the members give their opinions, evaluate the complexity of the backlog, give the score of the backlogs (corresponding to the execution time) and agree on their views.
- Offline working with members: This is the time when everyone in the team exchange knowledge, communicate, consolidate the solidarity in the team.
- Sprint Retrospective: This is the activity that takes place at the end of a Sprint. Team members reviewed what was good and bad and what needed to be improved during the sprint. From there, the members are clear about each other and comfortably communicate and implement projects.

What is the least interesting part of this project?

- Constant change of software requirements or change of architecture and interface

- Making a professional and detailed document takes a lot of time and we had to do researches on many aspects.

- Detailed planning for each task requires experience in project work and accurate time measurement for that task

What needs to be improved to make the project team work best?

- The schedule should be more accurate and relevant
- Participate more actively in working together, especially face-to-face meetings and daily meetings
- There is a clear purpose
- Set and follow the rules in the group
- Accept differences
- Should enhance more team building activities

How could you/your mentor(s) change this project to make it better next time?

- Another way to make our project become better is that we should keep in touch with our mentors and report the difficulties that we are facing.
- Continue learning about new technologies to improve our skills.
- More focus and discussion on the project.
- Understand the problems faced by market applications and from that, we try to apply and improve our application.