Ministry of Education
Umm Al-Qura University
Collage of computer and information system

SUMMER TRAINING REPORT

AT

(Eisar Information Technology Company)

DURATION:

26 June 2022 to 25 August 2022

SUBMITTED BY:

Sarah Mansour Alwethinani

STUDENT ID:

439006737

DEPARTMENT OF COMPUTER SCIENCE

COLLEGE OF COMPUTER AND INFORMATION SYSTEMS

UMM AL-QURA UNIVERSITY

SUMMER TERM, 2022

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Chapter 1 (Overview)

1.1 Introduction:

This summer was the most effective summer of my whole life! I got the opportunity to learn and practice interesting things in my field. I was lucky enough to be in a welcoming, inspirational, creative, and educative environment! I enjoyed the trip of searching, learning, !creating, discussing, and making out something

It opened my eyes to so many topics to learn and plans to make. It was a nice experience and it's only the start of the road.

1.2 Company background:

A smart cloud system that allows the entities to manage the training process for employees and team members. The aim is to Achieve the highest degree of empowerment for the success and legalization of the training process in all sectors.

1.3 Company goals:

1. Enabling the government and private business sectors to make the training process a success.

2. Ease of organizing the training process by providing a variety of services.

3. Raising the quality of the training process for various entities.

1.4 Company services:

1. Organizing training and development in establishments.

2. Connecting with systems.

3. Certification System.

4. alert management system.

5. List tasks and track activity.

6. Advanced stats and reports.

7. Automated training models.

8. Ease of controlling permissions.

9. Creating a training plan and following up on training work.

10. A platform to manage the training process with less time and effort.

1.5 Company summer training plan:

The training program started from: June 26, 2022, until August 25, 2022, at a rate of 8 hours per day. The trainees were divided into different tracks, and I chose the applications track or the front-end team.

The training was divided into two phases; So that the first phase extended to four intensive weeks and the second phase extended to the end of the program.

The training program is divided into four tracks, through which it gives the student opportunities to acquire and enhance his general and specialized skills to be able to meet the requirements of the modern labor market and meet its needs. Where the paths are:

1. web path.
2. Applications path.
3. Design and Digital Marketing path.
4. E-Commerce Path.

التجارة الإلكترونية	التصميم والتسويق	التطبيقات	الويب	التاريخ	اليوم
التعارف – البرنامج التعريفي لشركة إيسار				2022 - 6 – 26	الأحد
مقدمة عن المسارات – آلية العمل				2022 - 6 – 27	الاثنين
نظام إيسار 01				2022 - 6 – 28	الثلاثاء
نظام إيسار 02				2022 - 6 – 29	الأربعاء
نظام إيسار 03				2022 - 6 – 30	الخميس

التجارة الإلكترونية	التصميم والتسويق	التطبيقات	الويب	التاريخ	اليوم
GitHub 01				2022 - 7 – 03	الأحد
GitHub 02				2022 - 7 – 04	الاثنين
Figma 01				2022 - 7 – 05	الثلاثاء
Figma 02				2022 - 7 – 06	الأربعاء
Off				2022 - 7 – 07	الخميس

التجارة الإلكترونية	التصميم والتسويق	التطبيقات	الويب	التاريخ	اليوم
E-commerce Google TM	Photoshop	Dart Flutter	PHP Laravel Tailwind Livewire	2022 - 7 – 17	الأحد
				2022 - 7 – 18	الاثنين
	Social Media			2022 - 7 – 19	الثلاثاء
				2022 - 7 – 20	الأربعاء
	Google Analytics			2022 - 7 – 21	الخميس

Figure 1: Training plan.

2.1 Program overview:

GitHub is an Internet hosting service for software development and version control using Git. It provides the distributed version control of Git plus access control, bug tracking, software feature requests, task management, continuous integration, and wikis for every project. Headquartered in California, it has been a subsidiary of Microsoft since 2018. It is commonly used to host open-source software development projects. As of June 2022, GitHub reported having over 83 million developers and more than 200 million repositories, including at least 28 million public repositories. It is the largest source code host as of November 2021.

2.2 Topics covered:

1. Explaining the website interface.
2. Explaining the desktop interface.
3. Creating a repository.
4. Cloning a repository.
5. Creating a branch.
6. Writing PHP files using visual studio code.
7. Committing files and pushing them to the branch.
8. Fetching and pulling data from remote repository.
9. Creating a pull request.
10. Explaining the conflict.
11. Maraging branches.
12. Creating a project.
13. Creating a view.
14. Creating a filter.
15. Creating an issue.
16. Assigning the issue to a group member or yourself.
17. Label the issue.
18. Creating a milestone for the issue.
19. Explaining actions.
20. Creating a tag.
21. Creating a release.
22. Creating a wiki.

3.1 Program overview:

Figma is a collaborative browser-based interface design tool, with additional offline features enabled by desktop applications for macOS and Windows. The Figma mobile app for Android and iOS allows viewing and interacting with Figma prototypes in real-time on mobile and tablet devices. The feature set of Figma focuses on user interface and user experience design, with an emphasis on real-time collaboration, utilizing a variety of vector graphics editor and prototyping tools.

3.2 Topics covered:

1. Explaining the website interface.
2. Explaining the desktop interface.
3. Explaining essentials plugins.
4. Explaining Figma community.
5. Explaining FigJam.
6. How to animate objects.
7. How to auto layout objects and create components.
8. Explaining the best UI/UX design practices.
9. Explaining how to make a prototype in Figma.
10. Explaining how to share Figma projects to be edited or viewed.
11. Explaining Figma resources.

3.3 Task

This is my practice on a skincare products application.

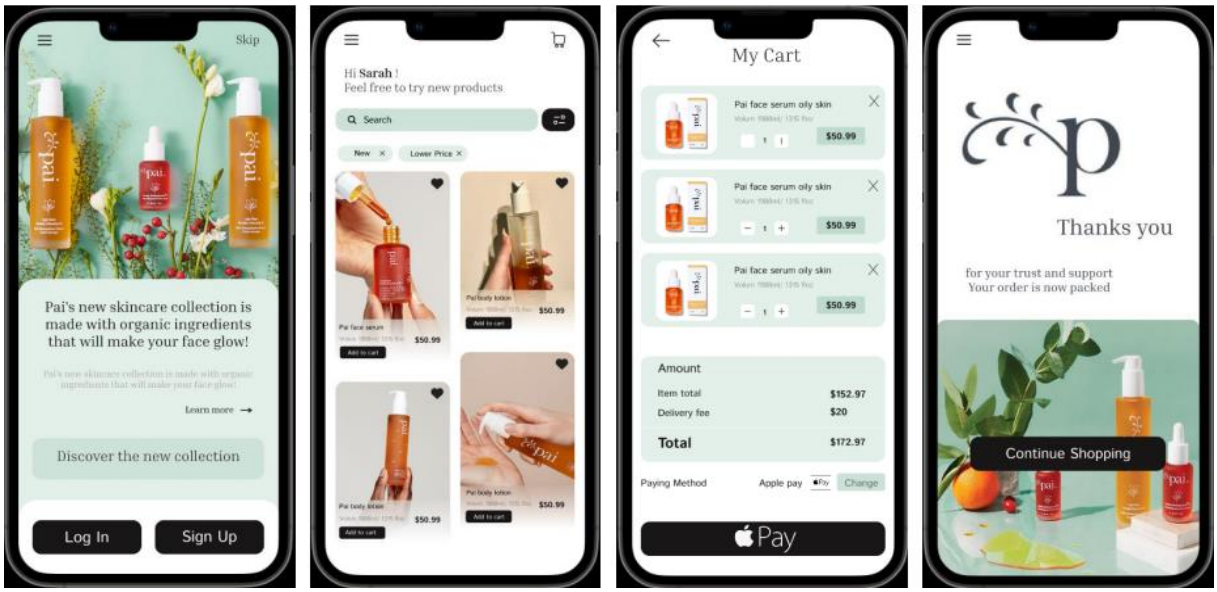

Figure 2: Skincare products application.

4.1 Program overview:

Flutter is an open-source UI software development kit created by Google. It is used to develop cross-platform applications for Android, iOS, Linux, macOS, Windows, Google Fuchsia, and the web from a single codebase.

First described in 2015, Flutter was released in May 2017.

Flutter apps are written in the Dart language and make use of many of the language's more advanced features.

4.2 Topics covered:

Starting the Basic Flutter Course (8 videos, 126 mins):

A starter course of how to go with Flutter..

1. Hello, Flutter! (13:35 mins) A Flutter app in its absolute simplest form. Text, Scaffold and AppBar.

2. The Fundamentals of Layout in Flutter (12:53 mins) Container, Column and Row.

3. Creating Your Own StatelessWidget (18:34 mins) Code organization, functions and creating your own StatelessWidgets.

4. Organizing Data with Models (24:56 mins) Using models and mock data to populate screen.

5. Working with Images (13:17 mins) Adding an image via URL. Working with Container constraints.

6. Managing Style and Adding Fonts (11:23 mins) Wrapping up a recipe! Consolidating style and using custom fonts.

7. Working with Lists (19:16 mins) New recipe kicks off with basic lists in Flutter using ListView and ListTile.

8. Navigation and Handling Tap Events (12:43 mins) Handling taps events in Flutter with callbacks. Using Navigator and MaterialPageRoute to navigate to a new screen.

Starting the Flutter for Junior Devs Course (3 videos, 58 mins):

A course module strictly for junior developers, specifically, developers that are familiar with some programming language but with less than a year of experience.

1. Super Simple Unit Tests (16:52 mins) Testing models by writing unit tests.

2. Reading Flutter Code Easily: Syntax Basics (13:45 mins) Review Dart basics by covering Functions, Classes, and Class Properties.

3. Creating First Flutter App (29:33 mins) Creating a new Flutter app, organizing Flutter code, creating StatelessWidget, using MaterialApp, Scaffold and Text widgets.

Starting the Tourism & Co. App Course (9 videos, 154 mins):

As a continuation of our initial course, we build out a realistic Flutter app, covering features used in almost any mobile app.

1. Sanity Checks with Integration Tests (19:47 mins) Testing to make sure the app loads by writing integration tests.

2. Working with JSON (14:57 mins) Getting ready for integrating with web services by covering JSON decoding and the json_serialization package.

3. Consuming Web Services (09:40 mins) Learn about Futures, async/await, testing and integrating web services.

4. Stateful Widgets (19:55 mins) Learn the fundamentals of state. By implementing StatefulWidgets and integrating the screens with web services.

5. Progress Bars (10:43 mins) Explore how to gracefully handle slow connections by showing a progress bar above listof locations.

6. Pull to Refresh (03:47 mins) Implement a RefreshIndicator, allowing the users to pull and refresh.

7. Custom ListViews (21:49 mins) Tie everything together learned thus far using the knowledge of layout, containers, images and text by making location listing gorgeous!

8. Beautiful Detail Screens (23:54 mins) Continue to beautify the app by creating stateless widget and refine location detail screen.

9. Custom AppBars (13:32 mins) Finalize the app design by learning how to extend widgets, creating a custom navigation bar.

Starting the Pro Flutter Essentials (4 videos, 93 mins):

Critical concepts, architecture patterns, features and best practices for building robust Flutter apps.

1. The "Hello World" of scoped_model (10:36 mins) The popular scoped_model Flutter package makes it easy to centralize and share state in the app.

2. scoped_model Podcast Player (30:59 mins) Coding a Podcast player concept screen using the popular scoped_model package.

3. Realistic Forms - Part 1 (28:46 mins) Cover the basics of Forms in Flutter, with text fields, a switch and checkbox controls.

4. WebViews in Flutter (23:01 mins) Using the webview_flutter package to present a full screen web view.

3.1 Project description

As a member of the front-end team, we were asked to build an application using Flutter for Eisar internship system which is divided into three categories based on the different users' requirements. The categories are:

1. The Student System.

2. The Company System.

3. The University System.

In fact, we were only able to code the company system, due to the limitation of time. But we learn a lot while coding the system and we faced a lot of errors and solved it efficiently.

3.2 Project analysis

In the project analysis phase, we were divided into three groups, each group was responsible for designing the system interfaces as well as creating the tables on the database. So, the groups were divided among the systems:

1. The Student System group.

2. The Company System group.

3. The University System group.

I have been chosen to work with my team on The Company System. And here are the user interfaces we designed in Figma:

Figure 3: Home page.

Figure 4: Student sign up page.

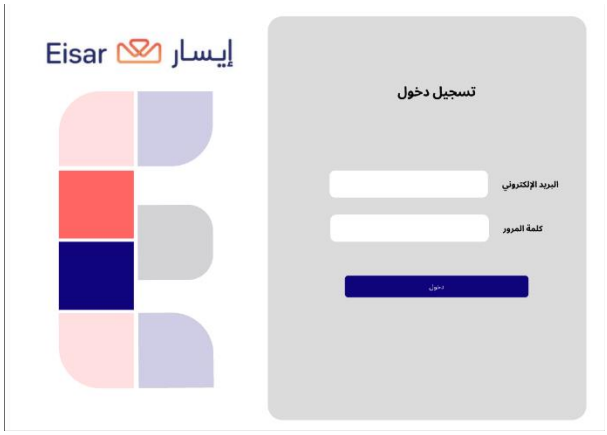

Figure 5: Log in page.

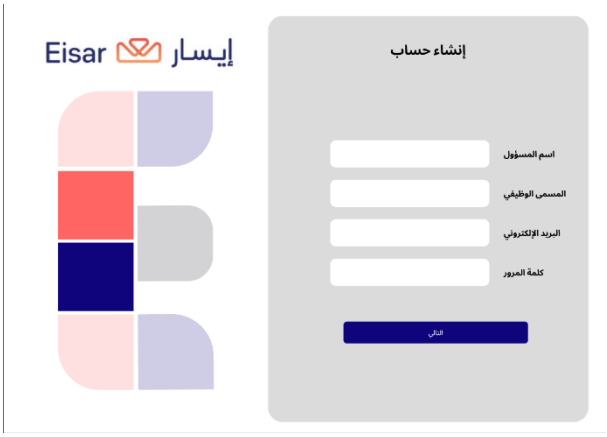

Figure 6: Administrator sign up page.

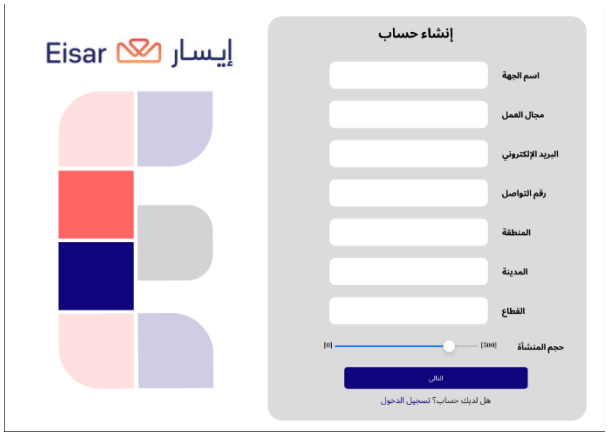

Figure 7: Company sign up page.

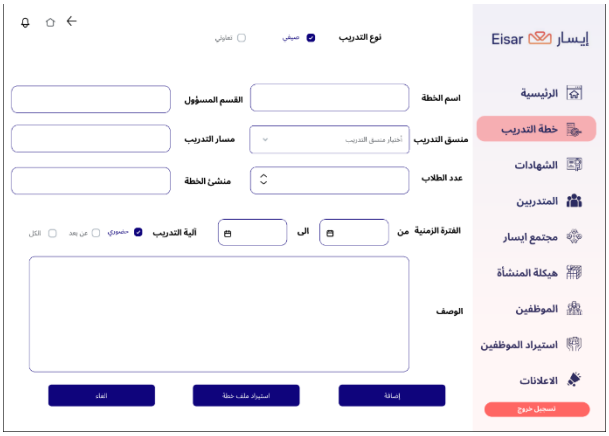

Figure 8: Create plan page.

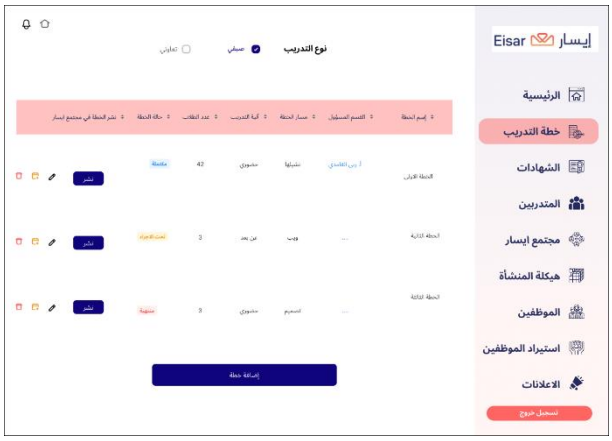

Figure 9: View plans page.

Figure 10: View students' applications page.

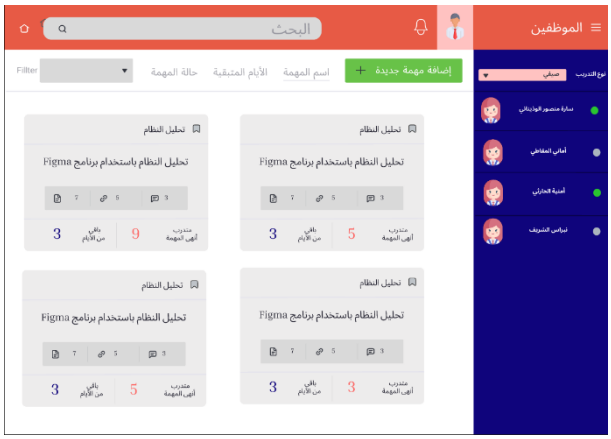

Figure 11: View tasks page.

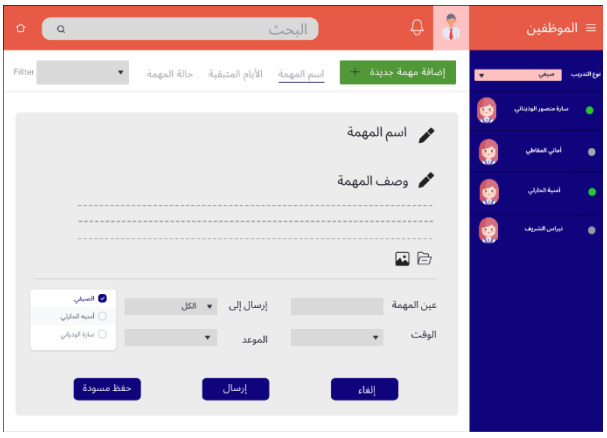

Figure 12: Create a task page.

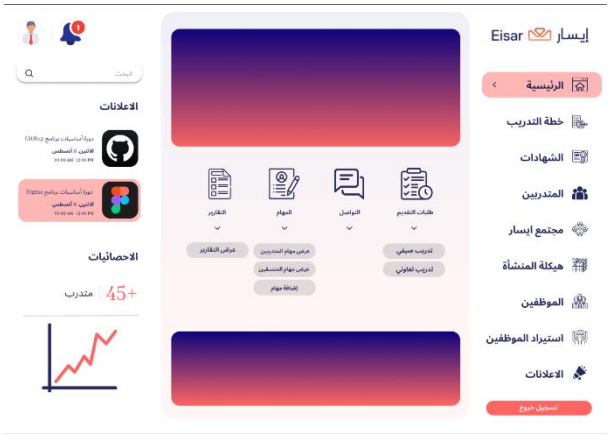

Figure 13: Administrator home page.

Figure 14: View employees' page.

Figure 13: Certificate page.

Figure 14: Eisar community page.

Figure 15: Employees' message page.

Figure 16: Students' message page.

The database tables:

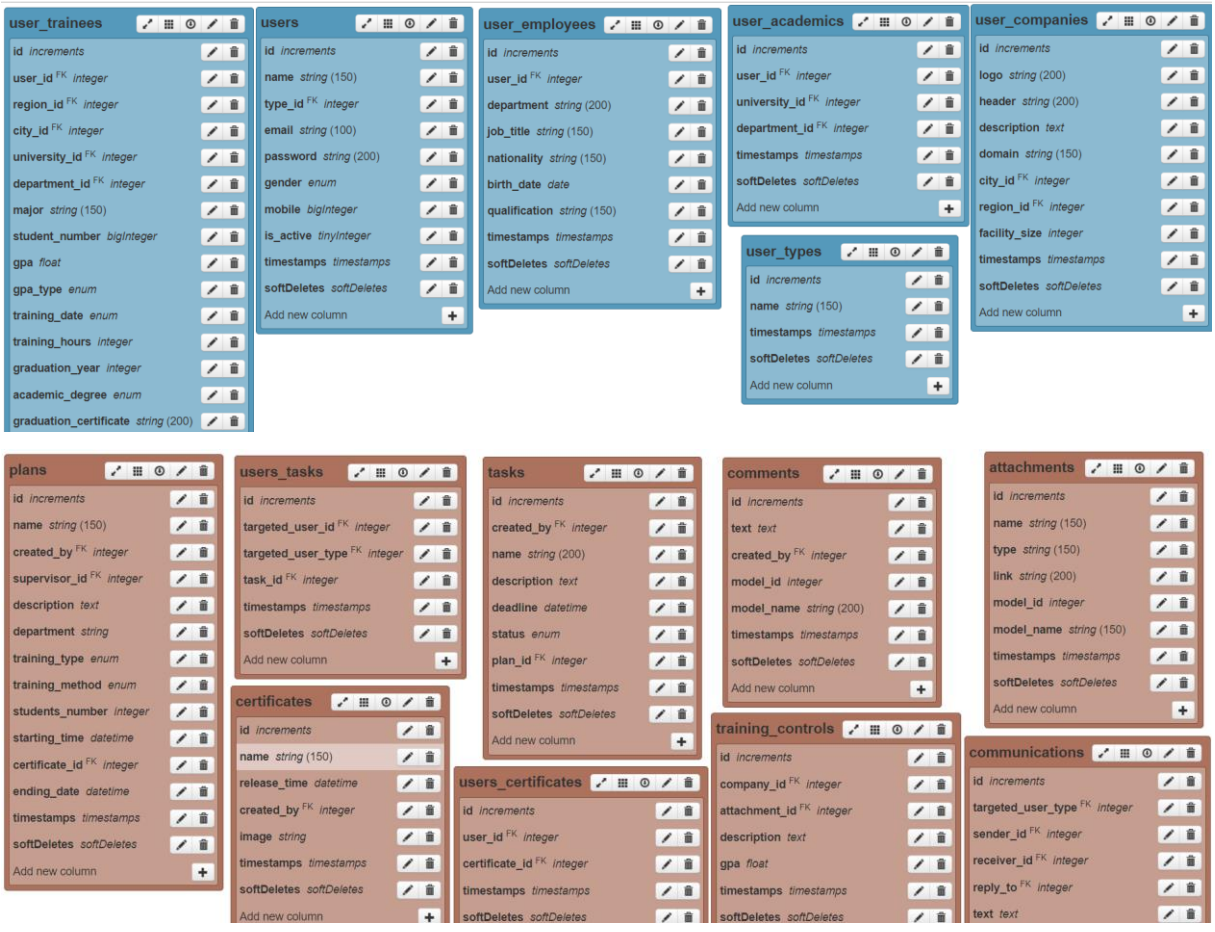

Figure 17: Database tables 1.

Figure 18: Database tables 2.

3.3 Project implementation:

We programmed the application in Flutter with the help of many tutorials that I mentioned in the resources. First, we start coding the control panel for the app. Then, we start to code the registration and log-in pages for all systems. Finally, we code the plans pages which are:

1- View the plans page.

2- Plane details page.

3- Add plane page.

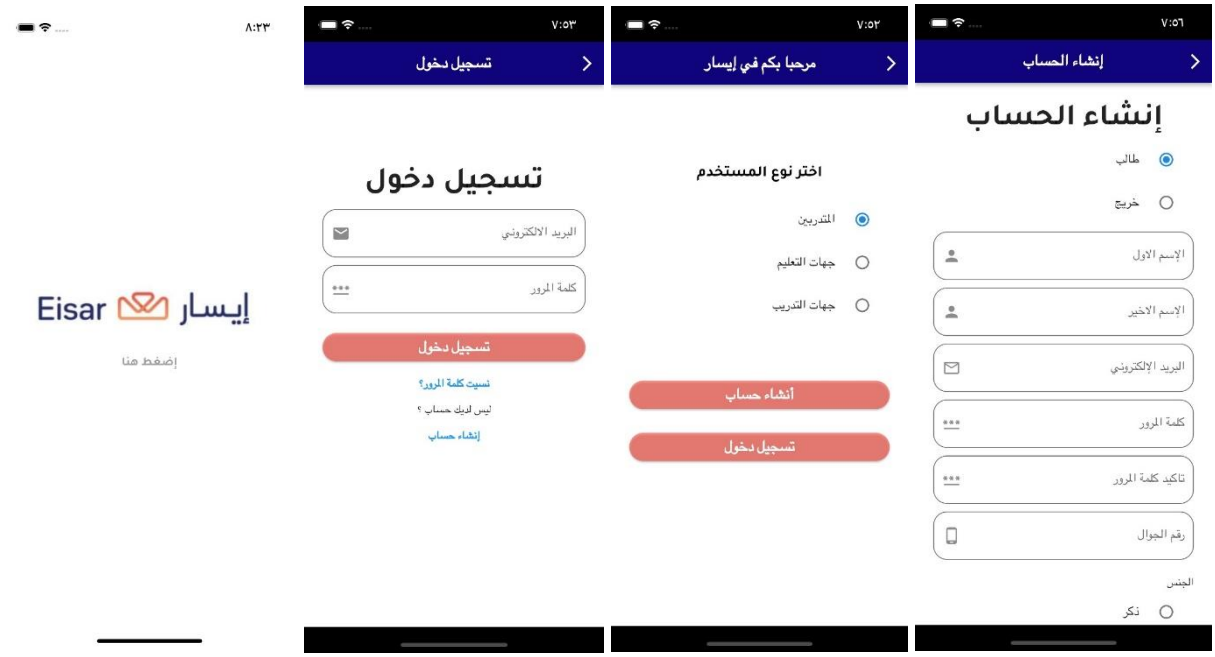

Figure 19: Registration pages.

Figure 20: Control panel.

Figure 21: Plans pages.

6.1 Conclusion:

At the end of the summer training, I realized that I improved magnificently either on the practical side or the personal side. I am now more able to manage my time among many tasks, my programming skills also improved, and my search ability and problem-solving increased due to the nature of the tasks I was asked to do!

On the other hand, I became more enthusiastic, I learned a lot of interesting things in my field of study, and I had the chance to meet inspirational people who gave me extra energy to complete my journey!

In fact, everyone was very cooperating, from the sweetest supervisor to every female trainee! The communication between us was so smooth and we all wanted to do a great job!

I am happy so far about this experience and looking forward to future ones!

6.2 Recommendations:

For the company responsible for the training, I would like to point out that it will be great if we could try out all paths so we can increase our benefit through the summer training. Then we can choose one and stick with it for the rest of the weeks!

otherwise, the company plan was so organized, and the staff was helpful and good to us.

6.3 References:

1. https://fluttercrashcourse.com/courses/basics
2. https://fluttercrashcourse.com/courses/juniordevs
3. https://fluttercrashcourse.com/courses/tourismco
4. https://fluttercrashcourse.com/courses/pro-essentials
5. https://youtu.be/C0gz3Eg9cx4
6. https://youtu.be/c09XiwOZKsI
7. https://youtu.be/I8L-1OILZhw
8. https://en.wikipedia.org/wiki/GitHub
9. https://en.wikipedia.org/wiki/Figma_(software)
10. https://en.wikipedia.org/wiki/Flutter_(software)

6.4 Appendix:

The application GitHub link⇩

1. https://github.com/EisarApp/summer_training/tree/dev/Eisar_training

The database tables link ⇩

2. http://www.laravelsd.com/630b9c7d54c11

The prototype for Figma task⇩

3. https://www.figma.com/proto/kqWW5vWDTzDLkGKfQaDlV9/Figma task?page-id=0%3A1&node id=2%3A6&viewport=552%2C319%2C0.29&scaling=scale-down&starting point-node-id=2%3A4

The prototype for The Company System ⇩

4. https://www.figma.com/proto/QUKENpLCdpiLigPDNI2IVI/The-Company-System?page-id=0%3A1&node-id=2%3A6&viewport=250%2C421%2C0.05&scaling=scale-down&starting-point-node-id=2%3A6&show-proto-sidebar=1