

ARDHI UNIVERSITY



**SCHOOL OF EARTH SCIENCE REAL ESTATE AND BUSINESS STUDIES AND
INFROMATICS (SERBI)**

DEPARTMENT OF COMPUTER SCIENCE AND MATHEMATICS (CSM)

**BACHELOR OF SCIENCE IN INFORMATION SYSTEMS AND MANAGEMENT
Bsc(ISM)**

INDUSTRIAL TRAINING REPORT

Student name and reg.no: NYEMA MUDHIHIR H (26990/T.2021)

Company name: TANZANIA COMMERCIAL BANK

Company physical's address: Head Office 10th LAPF Towers, Makumbusho,
Kijitonyama, P.O BOX 9300, Dar es salaam

Industrial supervisor's name: Mr. Arthur David

University supervisor's name: Mr. Yohana

ABSTRACT

This report gives details of my first industrial training experience attained from 17th of July 2023 to 8th September 2023 at the TANZANIA COMMERCIAL BANK. Shows and gives more details on the achievement I got on my industrial training, I learned and test things more practically and I got an experience on how to support a user and solving their problem due to main tasks I was performed during my industrial training.

It will mainly comprise of four chapters.

Chapter one explains about the historical background, location, name of the organization, the organization's mission and vision, the organization's function and brief provide description of assigned tasks and describe whether assigned task fall under the role of IT department.

Chapter two explains all about the assigned tasks such as web development and mobile application development, enterprise systems development, system administrator, systems that are operating in the organization.

Chapter three explain all about the overall programme challenges the psychological challenges, physical challenges and technical challenges and measures used to control those challenges.

Chapter four explain all about the recommendation and suggestion.

ACKNOWLEDGEMENT

Firstly, I would like to thank God for having been with me from the start until the end and having me passed all times throughout the industrial training period. I also thank the TANZANIA COMMENRCIAL BANK for giving me the opportunity to do my industrial training and being hand in hand with me and my fellow colleagues.

I would also like to thank our main supervisor Mr. Arthur David and other supervisors Mr. Daudi Kajiro, and Mr. Eliatosha Kwizera for their endless support throughout the industrial training period.

Lastly, I would like to thank my fellow colleagues for their cooperation and support throughout the industrial training period.

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CHAPTER ONE

1.1 INTRODUCTION

1.1.1 Name, Nature and Environment

Tanzania Commercial Bank is a Commercial bank in Tanzania that has been mandated to administer All Transactions and All bank activities such as financial solutions. Located in Millennium tower makumbusho Dar es salaam.

1.1.2 Historical background of the organization

Tanzania Commercial Bank PLC (TCB) is one of the oldest bank in Tanzania tracing its history since 1925 when Tanganyika was under British Rule and was then known as Tanganyika Postal Office Savings Bank (TPOSB). It later became a Savings Bank under the then East African Post and Telecommunications Corporation which ceased to operate after the collapse of the East African Community and led to the formation of The Tanzania Posts & Telecommunications Corporation (TP&TC).

The Tanzania Post Office Savings Bank was formed under TP&TC and continued its operations until 1991 when it was transformed into a separate entity from TP&TC as Tanzania Postal Bank (TPB) by The Act of Parliament No. 11 of 1991 which was repealed in 2015. In 2016 the bank was incorporated under the Companies Act (Cap 212) as TPB Bank PLC and in 2018 TPB Bank

PLC was merged with Twiga Bancorp Limited and Tanzania Women's Bank Limited. In 2021, TIB Corporate Bank Limited and TPB Bank PLC were merged to form Tanzania Commercial Bank Plc (TCB). Over the years TCB has been transformed into one of the largest and most profitable commercial bank in Tanzania. 1.1.3 Organization Mission and Vision.

Mission

To aid in the transformation of the socio-economic landscape of Tanzania by providing and promoting financial solutions in a sustainable way while ensuring stakeholder expectations are met.

Customer Focus: All our activities are primarily focused on customers' needs and their fulfilment; we invest to enhance their experience of banking with us. The market we serve determines our choice of products and services and the way we deliver them.

Vision

To be the leading bank in the provision of affordable financial services and promoting financial inclusion in Tanzania. TCB offers the full suite of financial solutions and has a track record of being one of the most innovative banks in Tanzania.

1.1.3 Functions of the organization

The Tanzania commercial Bank has the following functions;

- i. To provide convenient banking product
 - ii. Services through the deployment of innovative solutions
 - iii. Registration of land titles and legal documents
 - iv. Enhance value to stakeholders and contribute to the socio-economic needs of the Country
- Information Communication and Technology (ICT)

Objective:

To ensure appropriate ICT systems that enable optimal performance enhancing quality and efficient service delivery

Functions:

- To oversee the implementation of ICT activities
- To develop a coordinated and integrated management information system
- To coordinate data warehouse and data storage
- To develop efficient ICT infrastructure and network security
- To coordinate the purchase of ICT hardware and software
- To develop and implement ICT strategy
- To research on software for system support and applications,

1.1.4 Activity performed by Information Communication and Technology (ICT) department

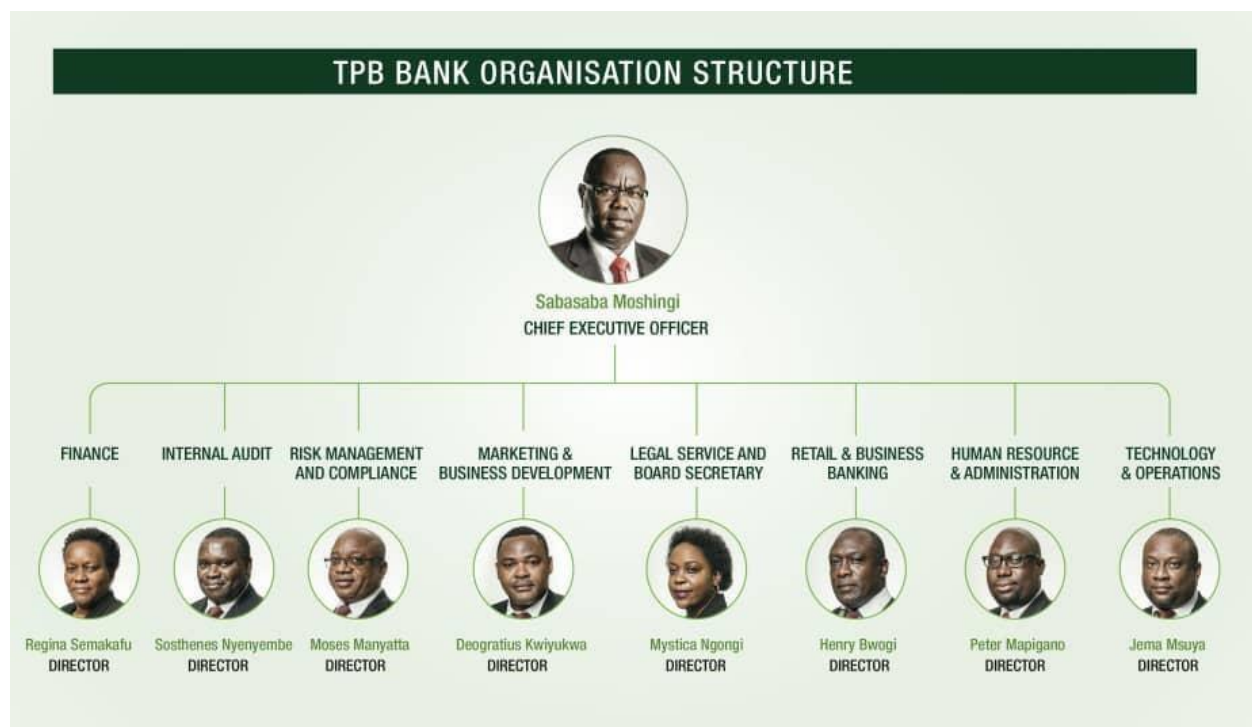
The main activity performed by Information Communication and Technology (ICT) department in the organization is business solutions support. Information communication and technology

(ICT) members are there to make sure other department are not getting any trouble in network or bad performance of all web apps and applications.

The assigned tasks such as web apps supports and applications, network troubleshooting and operating system installation, and some short class about server room, system administrator, systems that are operating in the organization and short class about programming skills.

1.1.5 Organization Structure

figure 1. 1 organization structure



CHAPTER TWO

2.1 Assigned Task.

The organization has a variety of Information Communication and Technology (ICT) activities, but for security reasons some of the work was limited to us, so the industry training was assigned the following tasks. Below is a clear description of the problem that caused the individual task, as shown below.

2.1.1 Flutter google ui kit course

This is the first task that was assigned to I, task was done through udemy platform tutorials. Task was involved to learn how flutter work, basics of flutter and how you can implement and install ide used to develop flutter applications. It was done through one week and two days to cover. Also after finished course another task was given to I, called Development of Simple Mobile App To store user Note or Key Points through app. Figure below is simple of image that show user login page for the application:

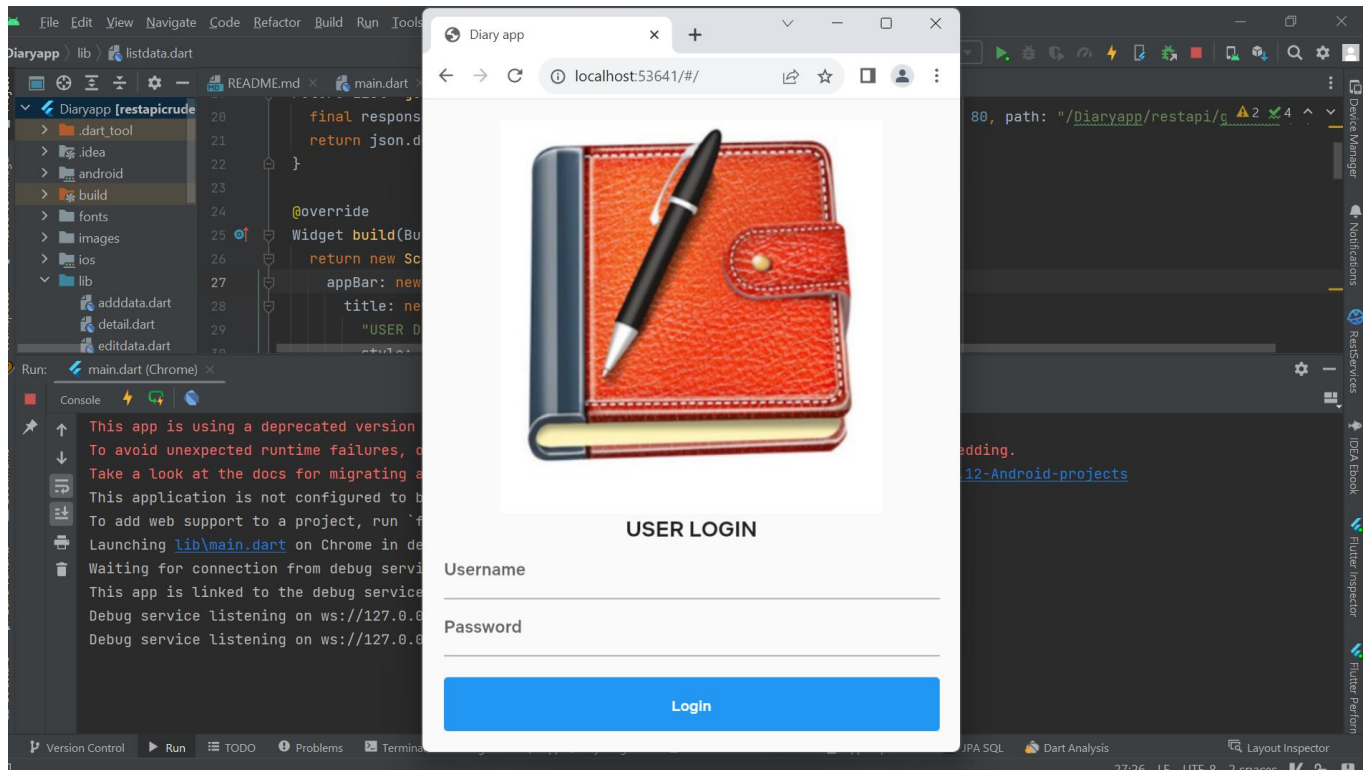


figure 2. 1 android studio ide for development flutter applications

Problem

Problem that I was face includes as: during installation of ide for development of flutter app (android studio ide). And how to configure flutter dependence file

Proposed solutions on solving the problem

Download free flutter dependence file online and installing in local disk c, with in src folder.

Below is sample figure that show flutter ide tool android studio how it look after solve the problem.

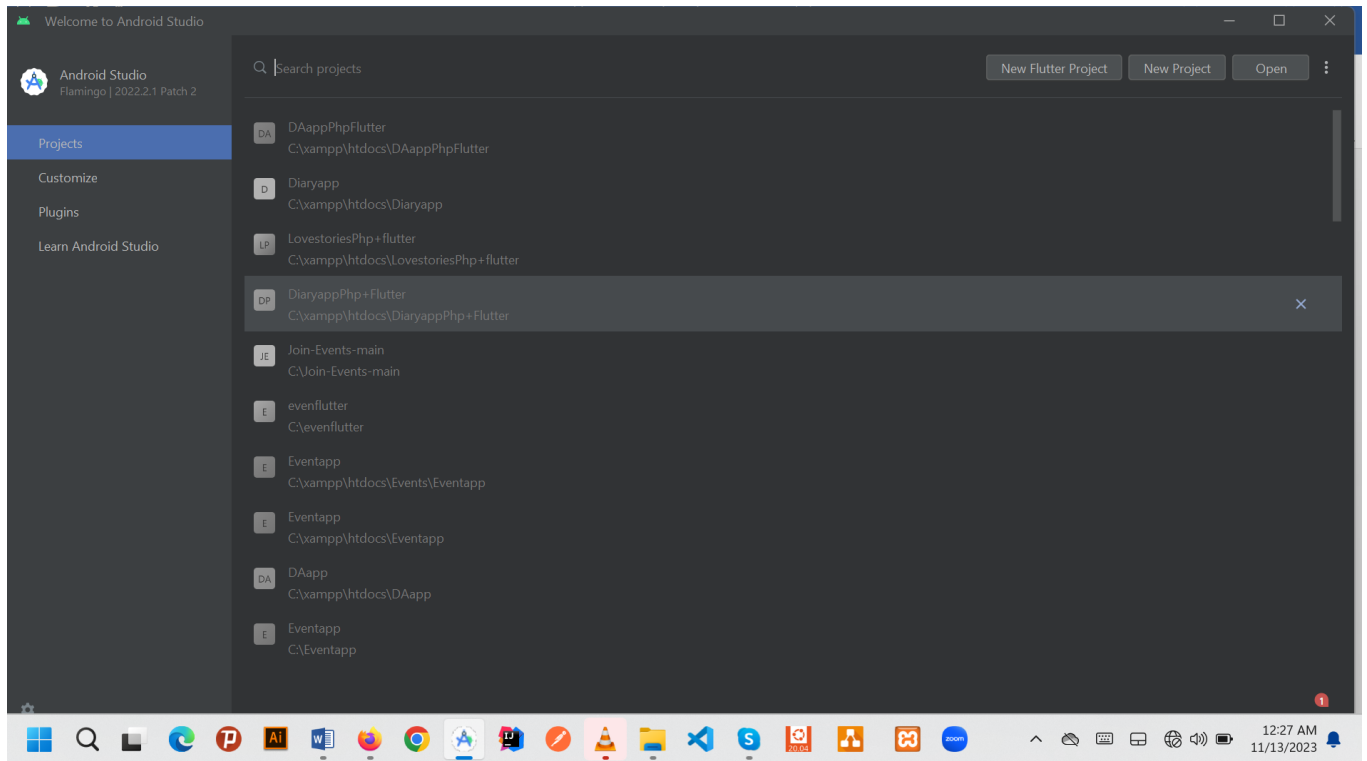


figure 2. 2 android studio ide for development flutter applications

2.1.2 Note keeper app development with flutter google ui kit.

Note keeper application refers to simple flutter app that aim is to store user's information or note keepings with in application lather than storing on notebook paper way that can be loss easily. Note keeper was done through flutter ui kit, MSQL database storage, SQL language o communicate with database and php endpoints Api's.

Problems

Problem that I was got is how to implement connection from flutter application with php endpoints. Specific on Url setting, figure below show the problem that I was faced on setting url

```
var url = Uri("http/Diaryapp/restapi/deleteData.php");
http.post(url as Uri, body: {'id': widget.list[widget.index]['id']});
Navigator.pushReplacement(context, MaterialPageRoute(builder:
(context) {
    return Home();
}));
```

figure 2. 3 wrong url setting.

Proposed solutions on solving the problem

```
var url = Uri(scheme: "http", host: "127.0.0.1",
port: 80, path: "/Diaryapp/restapi/deleteData.php");
http.post(url as Uri, body: {'id': widget.list[widget.index]['id']});
Navigator.pushReplacement(context, MaterialPageRoute(builder:
(context) {
    return Home();
}));
```

figure 2. 4 best setting url for connecting flutter app with php Ap's.

2.1.3 Java and spring boot course and enterprise applications development.

Spring boot mvc refer to java framework that use mvc (model, view, controller) architecture for development of apps, used also to develop enterprise apps that are more securable and dominates different organizations. Spring boot it can be developed through ide's such as eclipse, sts tool, or intellij tool, for my tasks I was used intellij ide. My first task is development of tuition center application to manage all activities with a Centre. Technologies that I use include Spring boot,

thyme leaf that process html, JavaScript and xml. With Spring boot involve implementations of entities or pojo's, services, repositories, controllers and ui or templates. The follows figure's below shows sample of entities, services, controllers, repositories for the tuition center application, include:

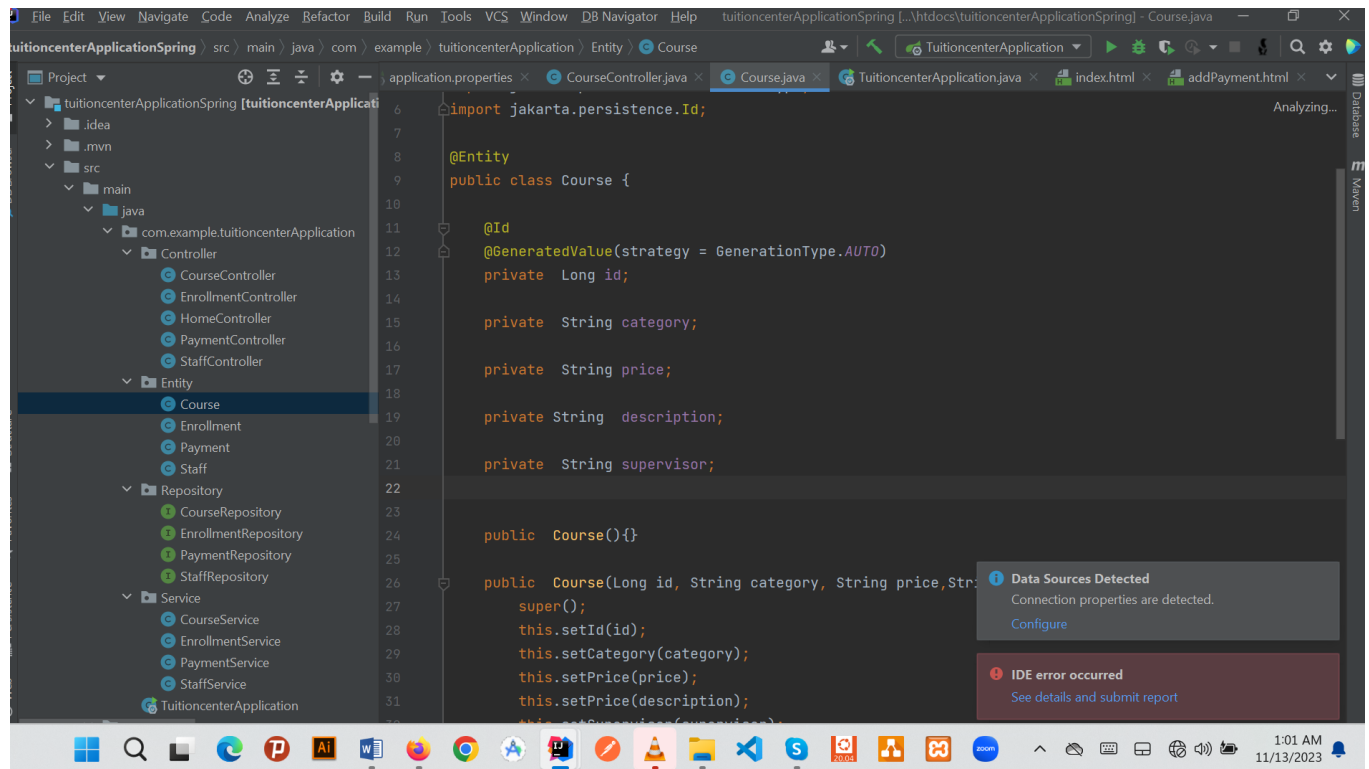


figure 2. 5 Example of entity part

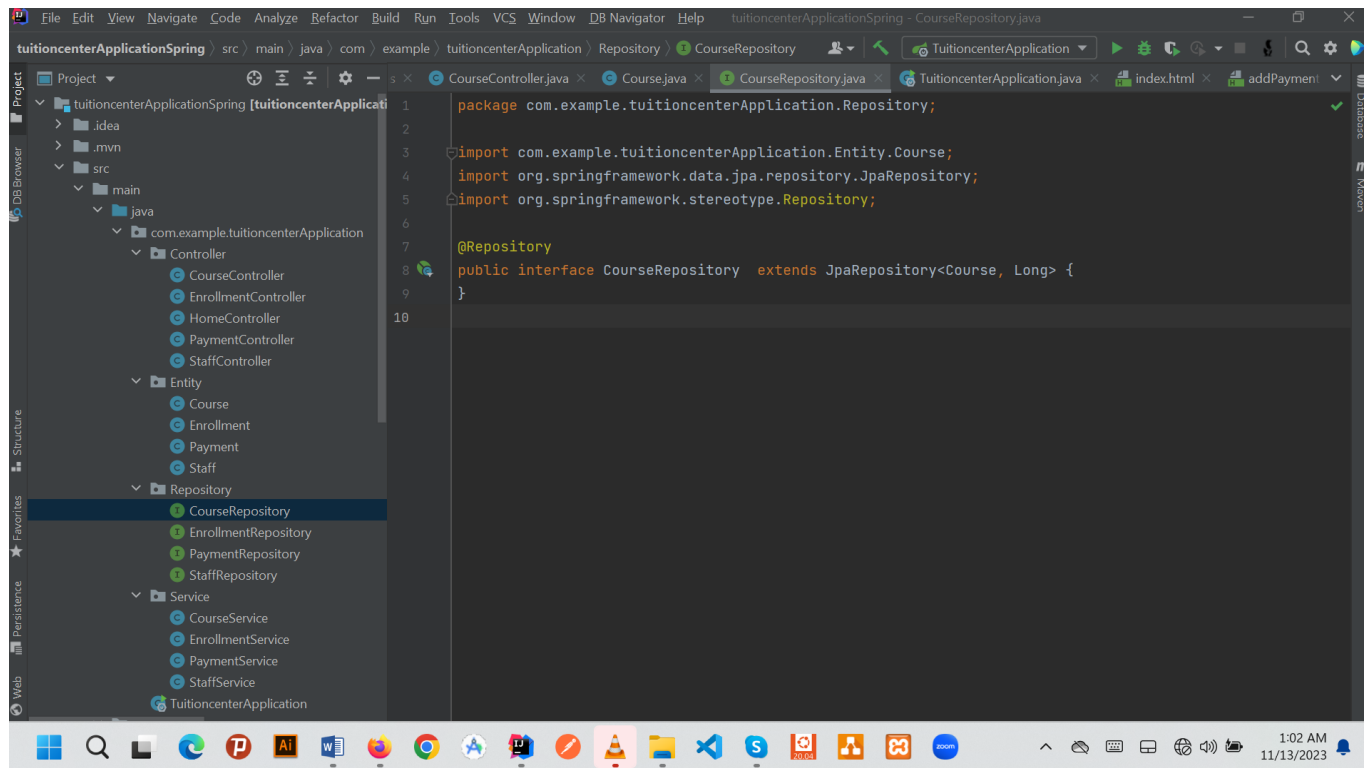


figure 2. 6 Example of repository part

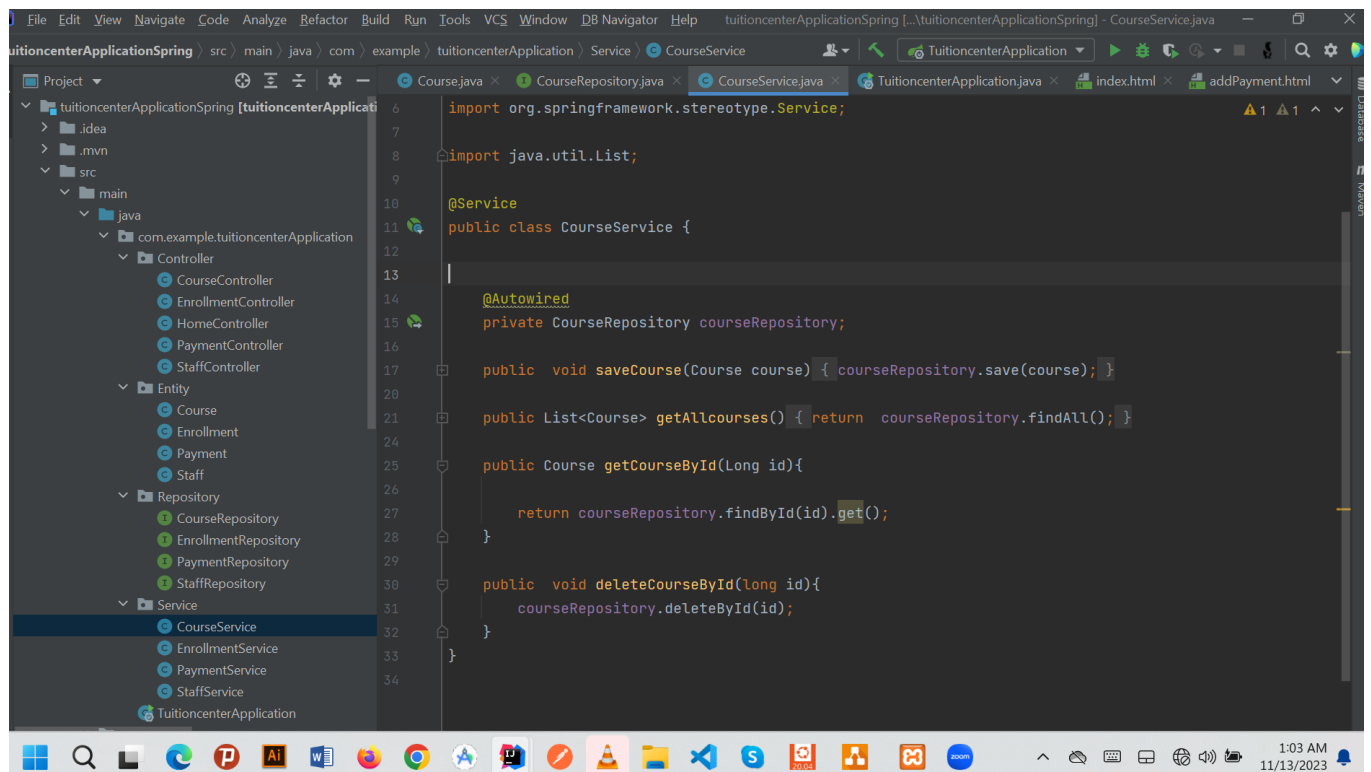


figure 2. 7 Example of service part

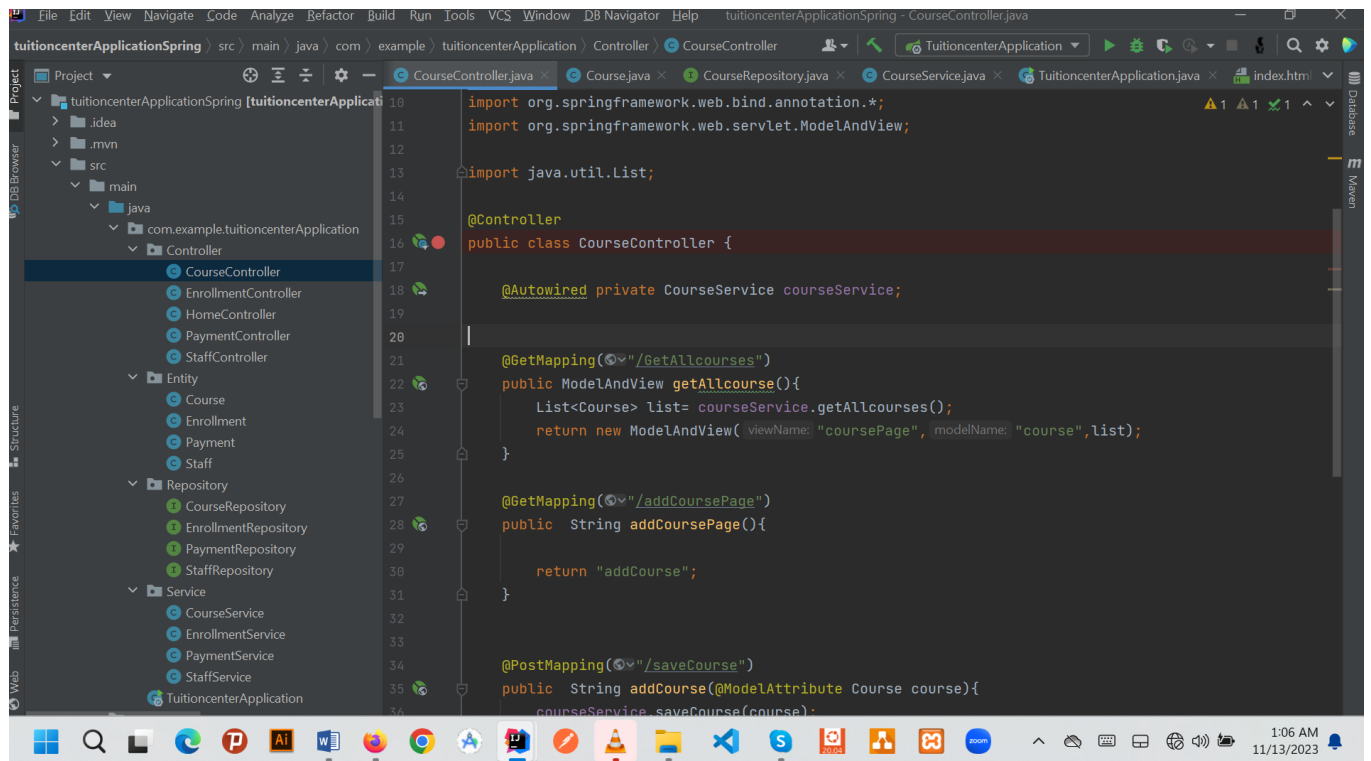


figure 2. 8 Example of controller part.

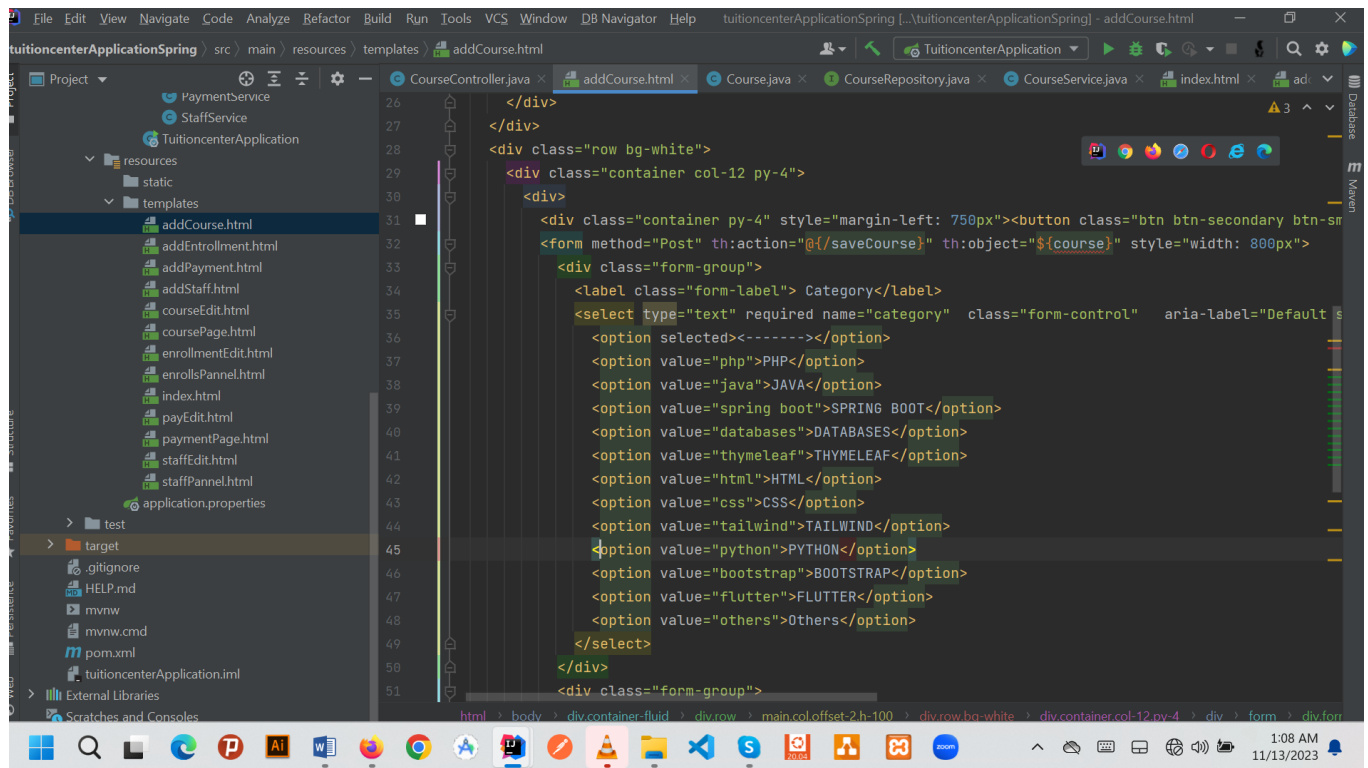


figure 2. 9 Example of ui part.

Problems

Problem that I was face is to installing intelliJ and configure for running Spring boot apps. Firstly, I was download intelliJ and installing on my computer but can work.

Proposed solutions on solving the problem

The best solution that I was done submitted a problem to my field supervisor Officer Arthur and I told me that download intelliJ for community edition, so after downloading and installing was firstly run and problem was solved.

2.1.4 Online banquet application using java and spring boot with thyme leaf and MySQL db task. This includes analysis of existing system how they work, designing implementation and coding.

Online banquet application will help to request rooms/halls for either wedding, meeting or ceremony, and help hall owners to tract all activities that take place on their halls example issue of requests and payments. The falls are some pictures that shows example of some implementations parts of the application includes:

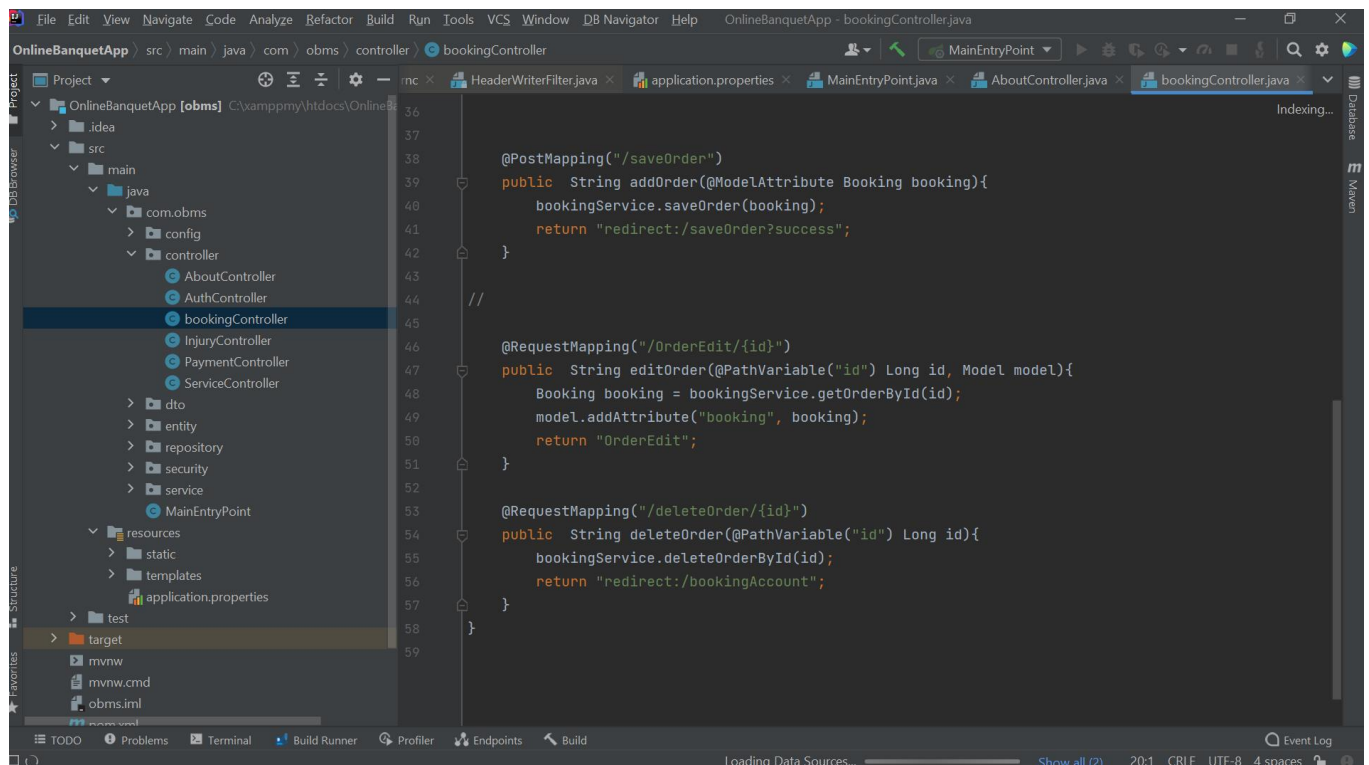


figure 3 Example of java and spring boot endpoint for booking or request room/hall.

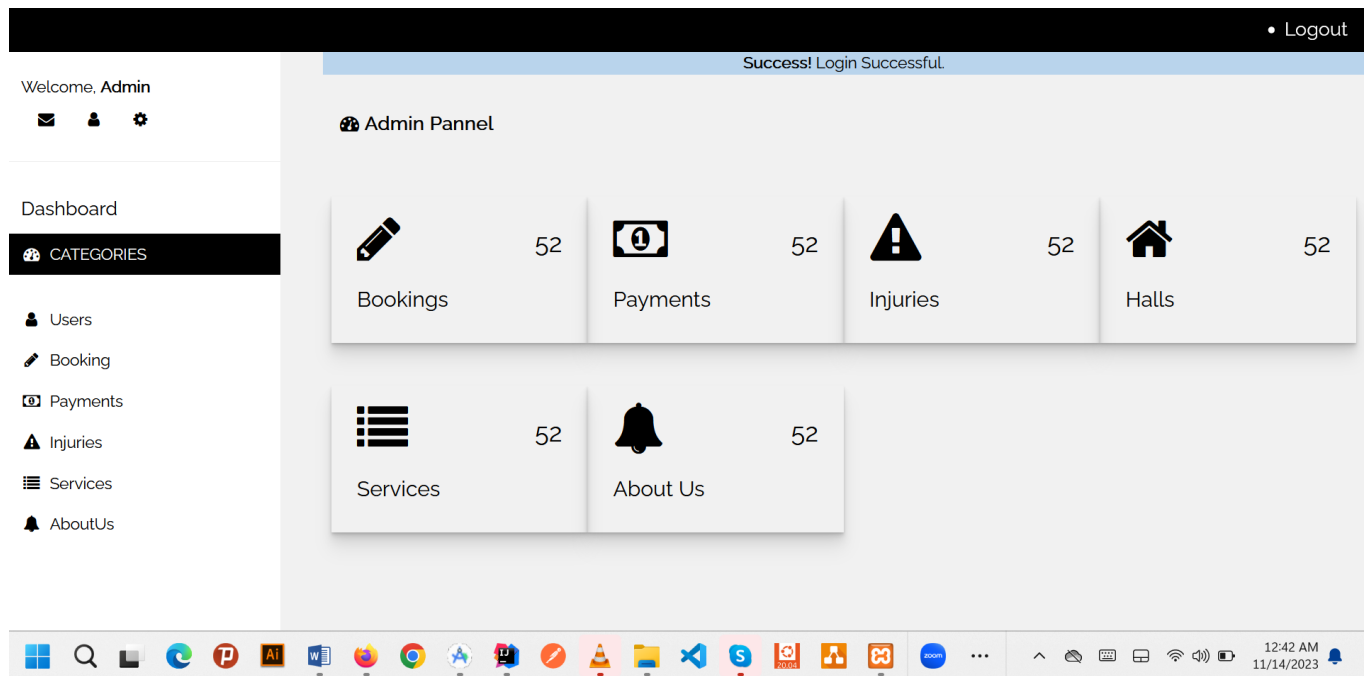


figure 3.1 Example of admin dashboard for the application.

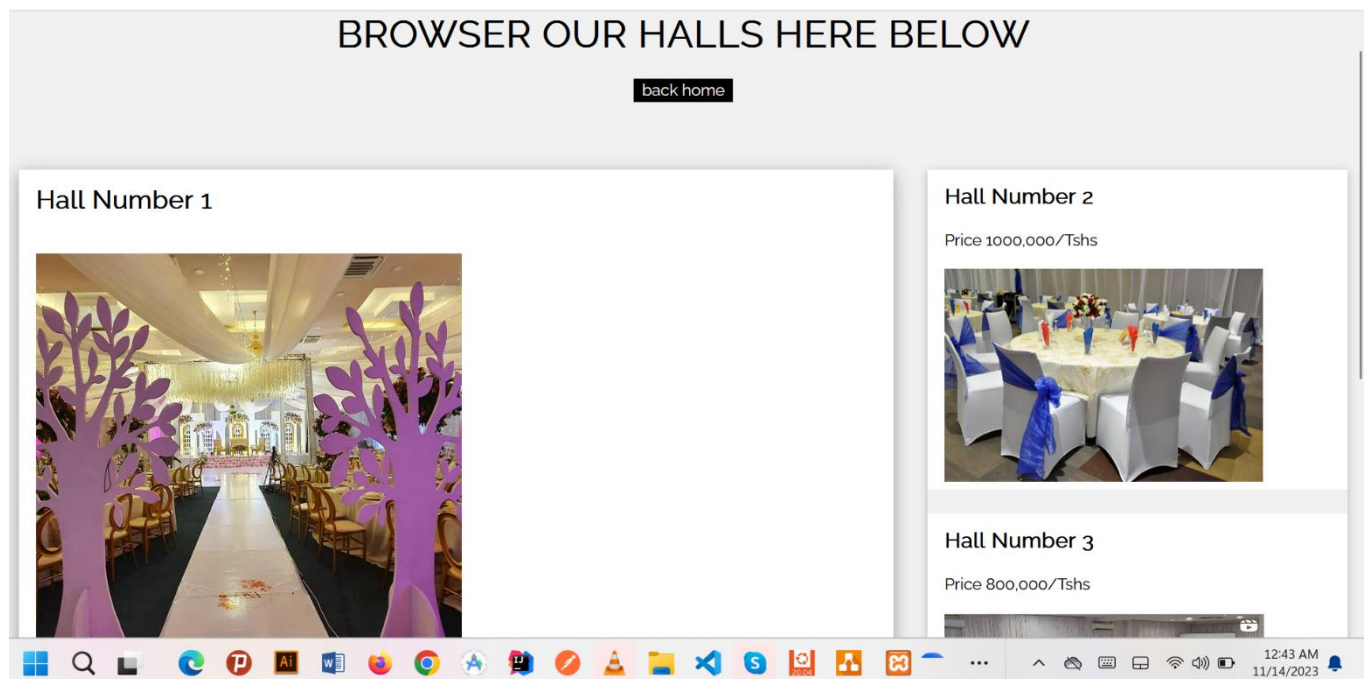


figure 3.2 Example of hall/room for requests

Problems

Problem that I was faced is how to configure MySQL database with spring boot endpoints Api's.

Example picture/figure below it shows errors that occurs for the problem.

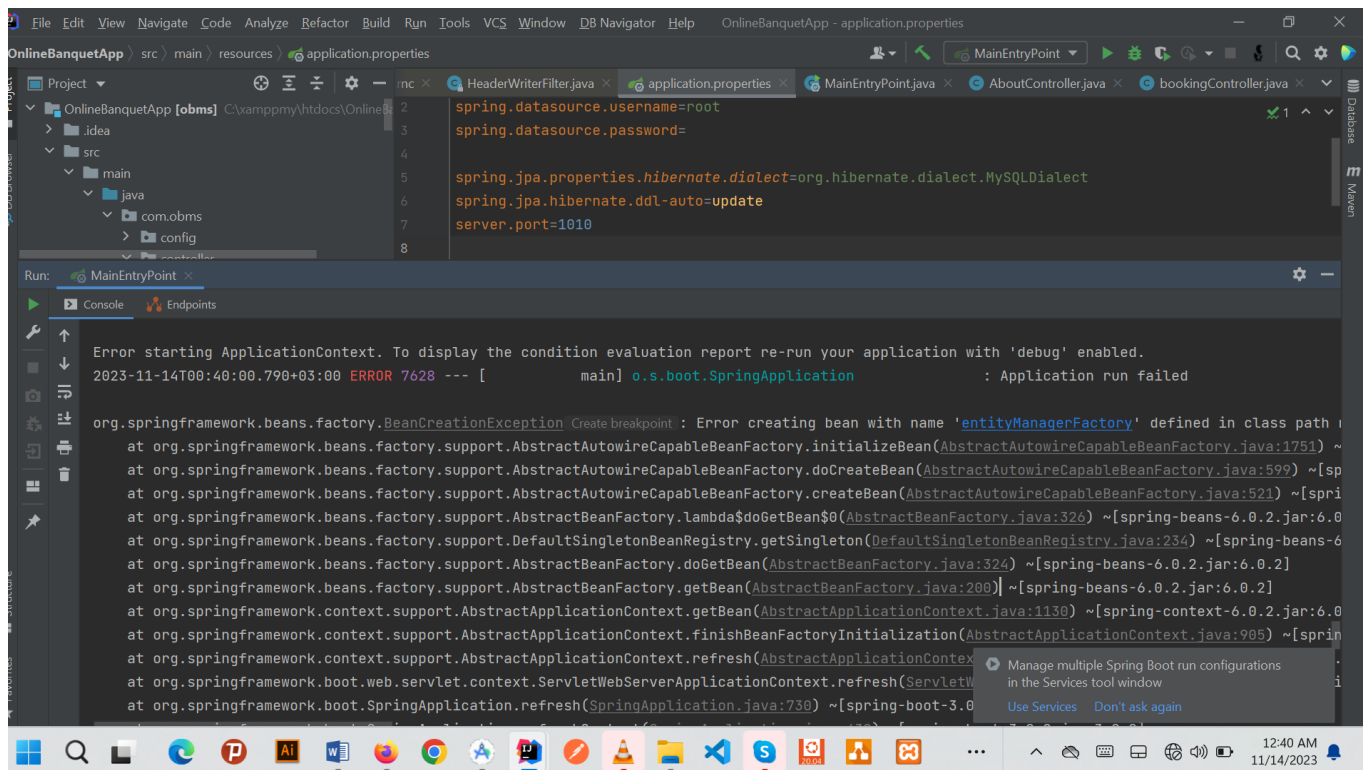


figure 3.3 MySQL configure error.

Proposed solutions on solving the problem

I was solved by configure MySQL on application. Properties figure below it show and application work properly.

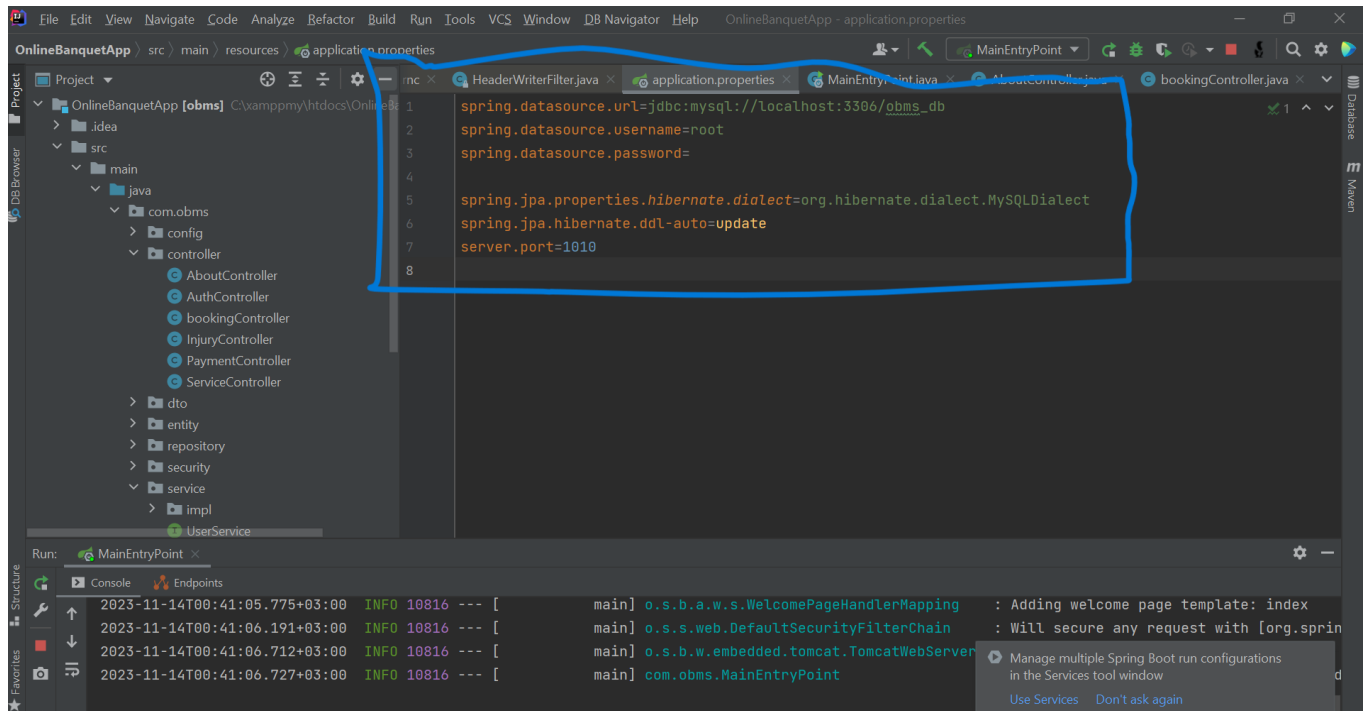


figure 3.4 Application after configure MySQL.

2.1.5 Network connectivity through Ethernet

This task I was Assigned to connect differs computer with in business solution room by using Ethernet only because no any network connectivity that use Wi-Fi technology because of security protection within an organization. Figure below It show sample image of assigned task.

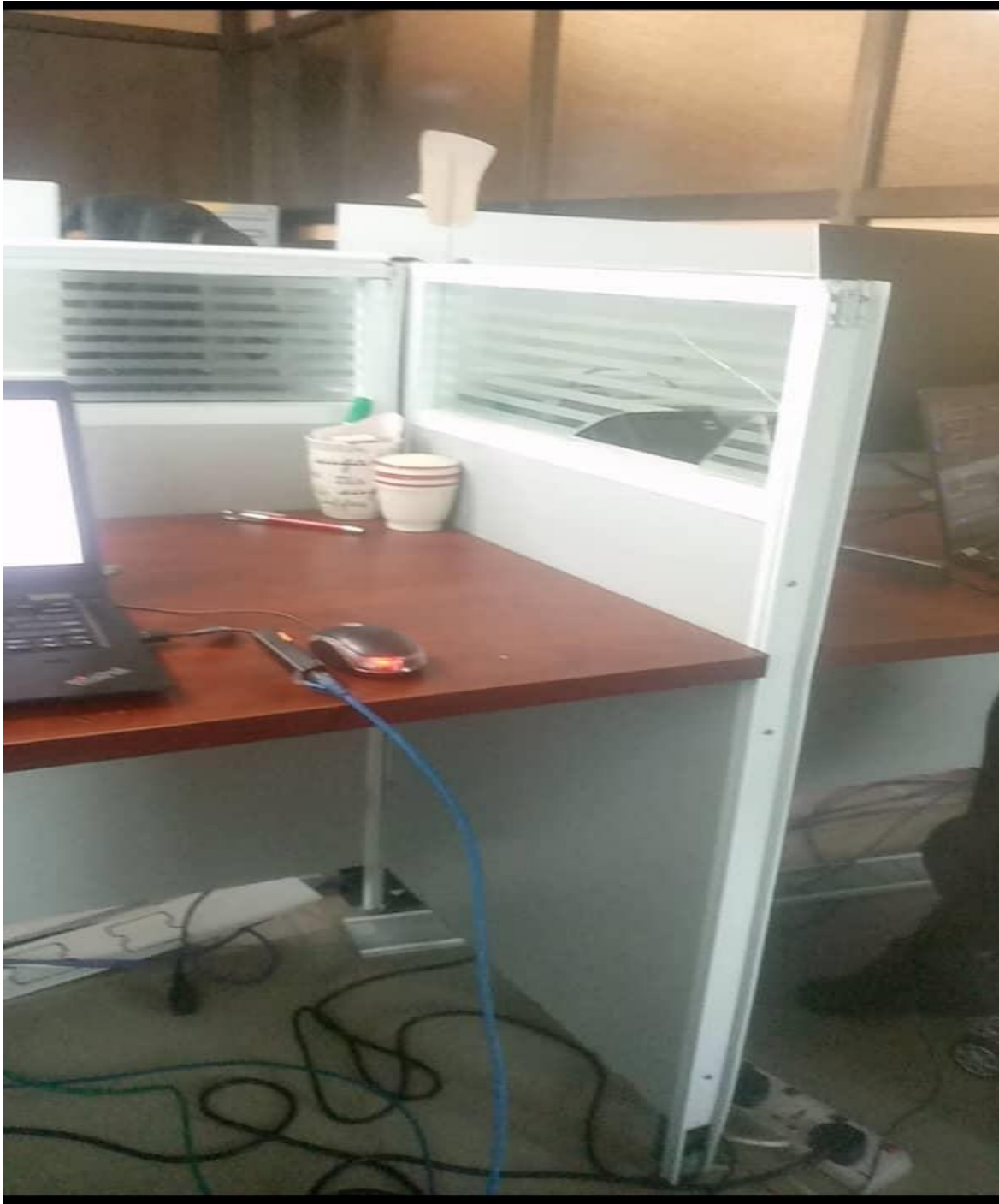


figure 3.5 Network connectivity assigned task.

Problem

Some computer's they don't use old version of Ethernet connectivity, so they need Ethernet converter to connectivity, that was the difficult I got during the given task.

Proposed solution

I was submit the challenge and he said that it need to buy Ethernet converter to connectivity so the problem was solved.

CHAPTER THREE

3.1 OVERALL CHALLENGES AND SUGGESTED SOLUTIONS

The working environment is genuinely friendly and favorable, and duties have been assigned commensurate with the level of supervision. We were encouraged to act as a team and, in many cases, to be precise, through certain duties that have been performed independently as instructed by my supervisor, thus helping me build self-confidence. I have also done several difficult work that requires self-initiation in performance and analytical skills that need creativity. But all the challenges encountered during my participation as a generally trained student were as follows:

3.1.1 CHALLENGES

- i. The physical location of our office was in the middle of the city of Dar es Salaam in a place called Makumbusho, so I was exposed to traffic almost every day and had many opportunities, so the time I should be in the office Has been shortened I am late for the office. On the other hand, it was expensive because I needed the sum of the two public transports from my place of residence to my office.

- ii. The absence of supervisors to the facts that most were used to conduct bank projects resulted to travel frequently from the bank office to Morogoro Region where the bank projects were conducted.
- iii. Time complicity, time was not enough which resulted to the most of given assignments not to be accomplished efficiently than how it supposed to be.

3.1.2 SUGGESTED SOLUTIONS

- i. In the department, school supervisors need to assign students to workplaces in the field, depending on their physical location, so that they can arrive at the workplace sooner. Also, if you find your own field, find the nearest dormitory so that you can get to work sooner.
- ii. organization should ensure that member staff have to travel by shifting from the organization during project conductivity hence could provide rooms for student to learn and be assigned tasks for right time.
- iii. In university, time for industrial training should be increased, two months are not enough compare with the assignments given to the industrial place are more complex and needs much time to learn and master it efficiently.

CHAPTER FOUR

4.1 RECOMMENDATION AND SUGGESTION

To improve the effectiveness and performance of students during the training, we recommend the following:

4.1.1 To students

- i. To actively and fully attend to their industrial training centers because the dedicated time is too short thus there will be no another time for them to learn more practically than during industrial training.

4.1.2 To university

- i. Encouraging the teaching of more practical sessions. There should be computer laboratories with enough tools for learning
- ii. The industrial training period should be increased. The time of eight weeks is short for a student to master the course. Considering the few practical sessions students get, field is the only place where student can learn more practically

4.1.3 To Organization

- i. Giving more opportunities to students to come for training
- ii. Giving financial support to the trainees by either giving them allowances or bus fares when they are coming from a distant place

4.2 CONCLUSION

The purpose of this industrial training was to learn and put into practice various ideas that were theoretically conveyed in the classroom. Through this training, I learned a lot, especially from discipline to living with other employees in the company. When it comes to discipline, time management was my most difficult lesson. I had to work on time and complete a given task on time. Respect was also one of the most important lessons I learned while in the organization. Also am grateful with the help of IT experts and their support in explaining to me any technical challenge that I faced during my Industrial Practical Training that helped in brooding my knowledge and work experience in my course of study

4.3 REFERENCES

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4.4 APPENDICES

- i. System administrator

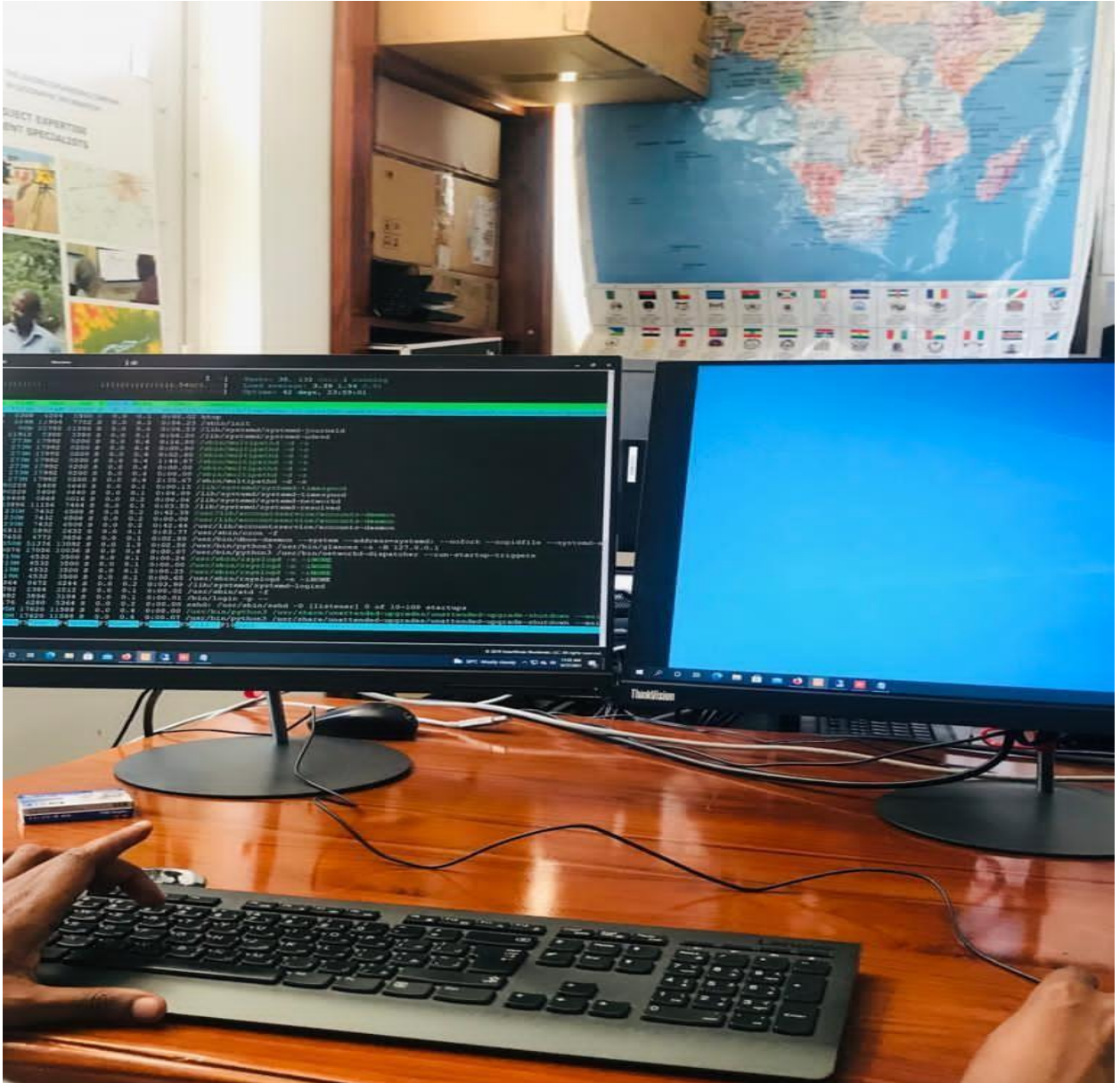


figure 4.1 1 system administrator display

ii. Server security

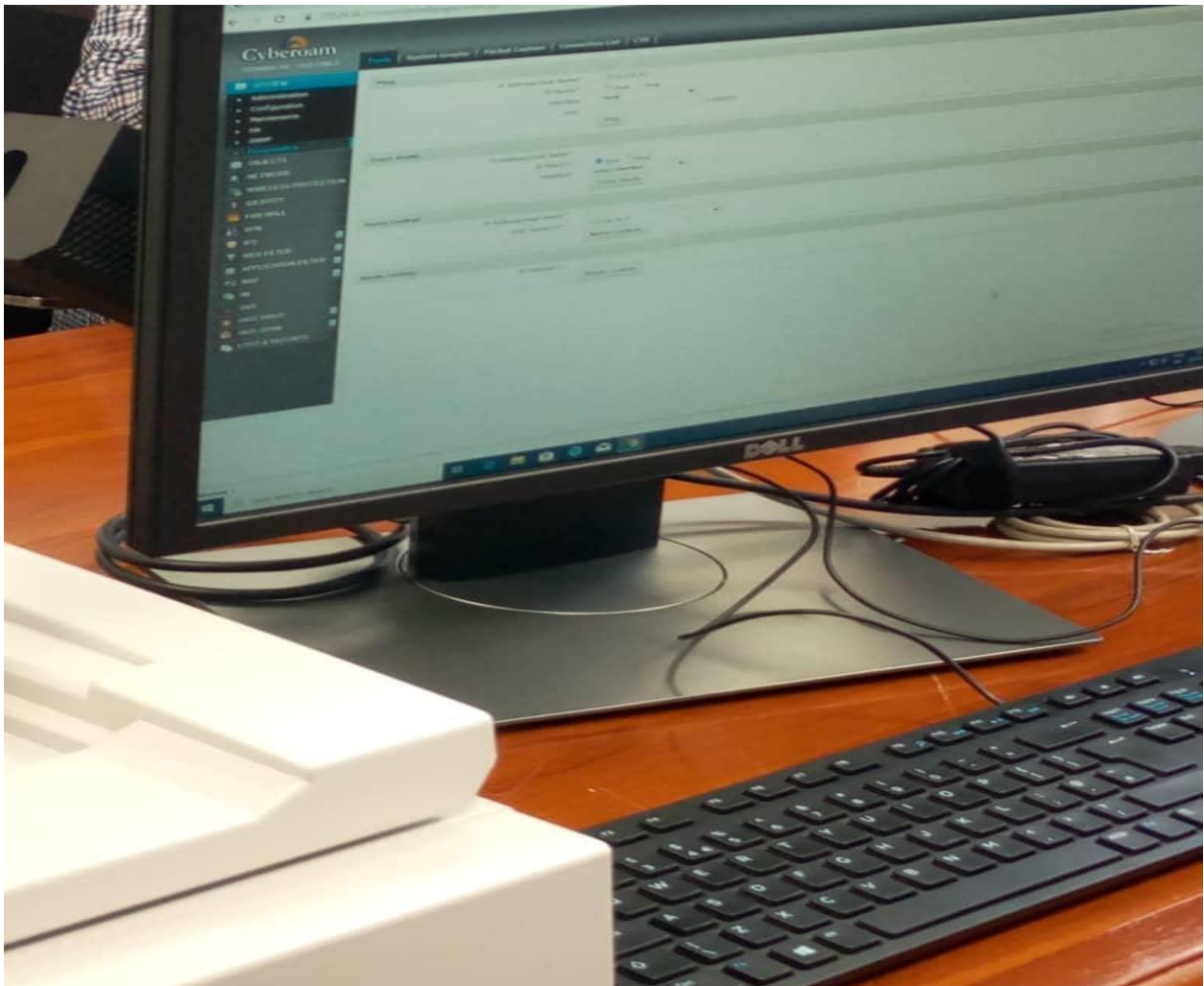


figure
4.2 1 cyberoam technology