



**QR Attendance System**

# Introduction

- According to the project that has been given to us, the purpose of the project was to speed up the attendance system i.e. the QR system related to the educational environment by using AWS

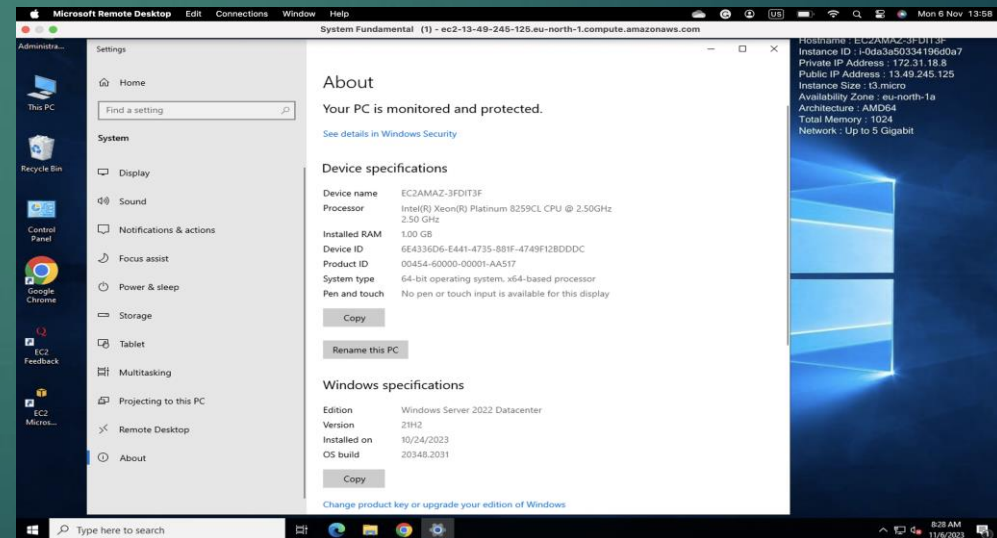
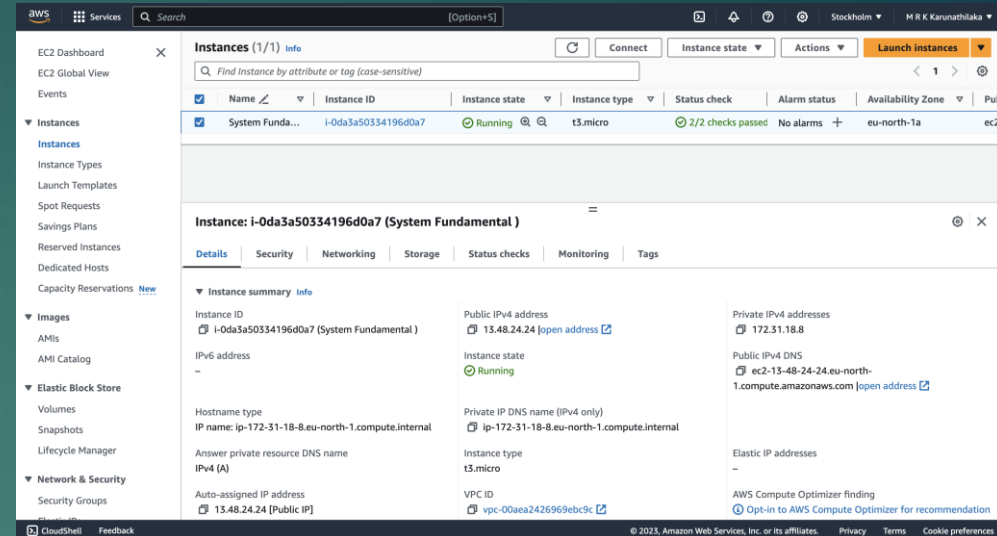
# Problem & Solution

- The main problem is the QR load process is slow. we designed a system to check the performance
- To create a fast QR attendance system using AWS services

# Project Timeline

1. Created AWS Free Tier Account.

2. Created Windows EC2 Instance.

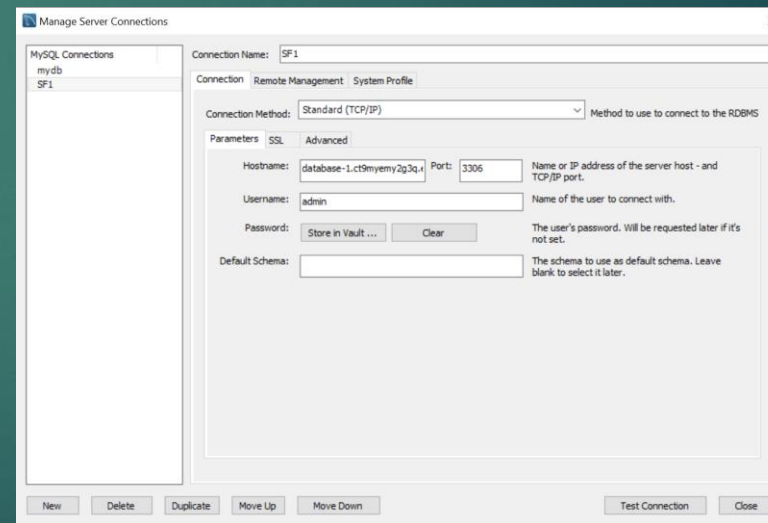
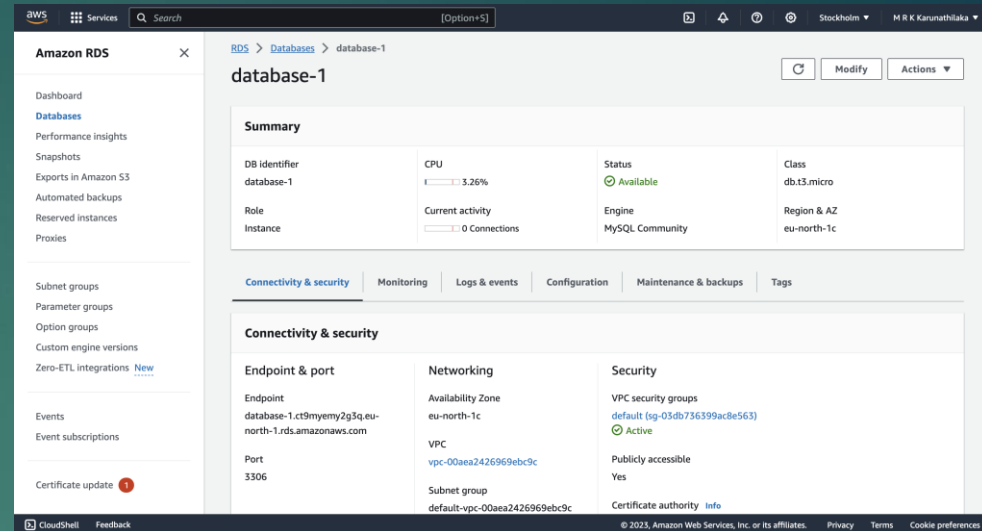


# Project Timeline

3. Installed the PHP and Apache into the Virtual Machine.

4. Launched Apache server in the virtual machine.

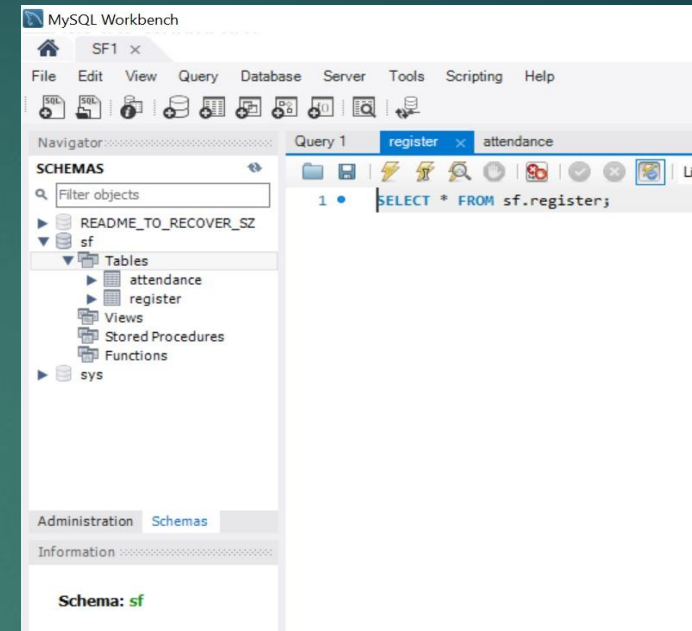
5. Created MySQL database using AWS RDS service and logged in using MySQL Workbench.



# Project Timeline

6. Enabled port 8000 for the Apache server and port 3306 for MySQL in the security groups.

7. Created a database called SF and tables (register, attendance) with respective columns.  
[Using MySQL Workbench]



1 • `SELECT * FROM sf.register;`

	uname	degree	password
26671		Technology Manage...	123t456d78
26688		Cyber security	rr250419
26715		Cyber security	trevon2005
26717		Cyber security	123456
26723		Cyber security	lahiru2579
26797		Computer networking	gepjy7-Qyg
26797		BSc (Honours) Comput	kakguv-bij
26797		Computer networking	nYtker-1qe
26797		Computer networking	Pucxan-sed
26797		Computer networking	qyzrex-Qar
26797		BSc (Honours) Comput	ryfmey-voH
27147		Computer Security	Sandu2005

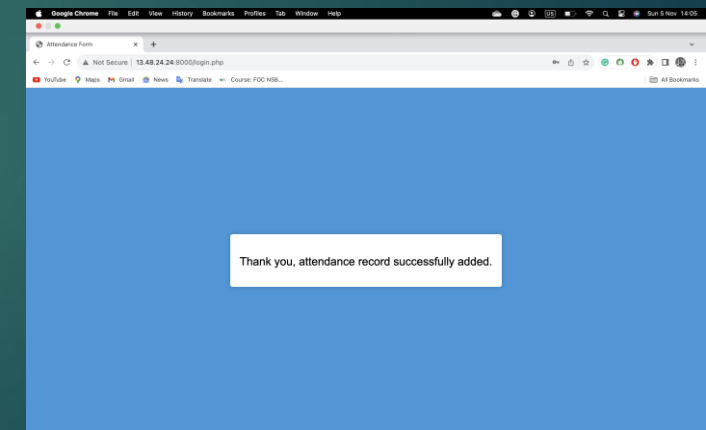
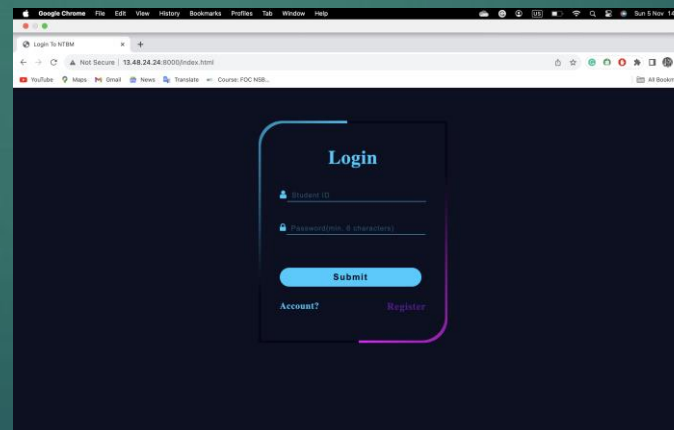
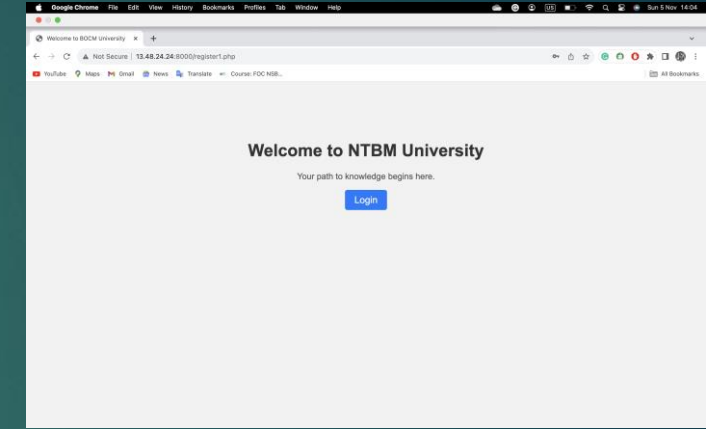
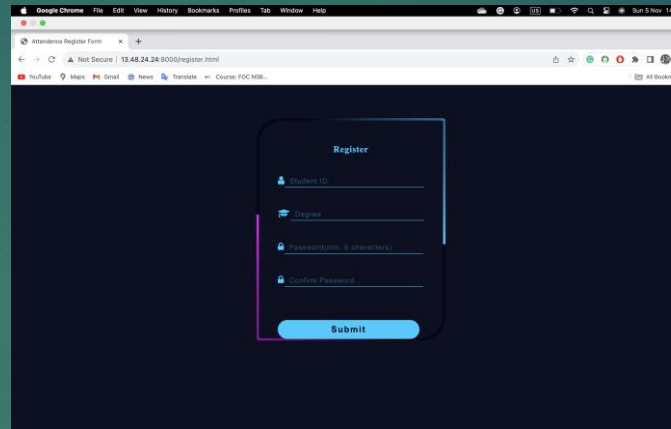
1 • `SELECT * FROM sf.attendance;`

	StudentID	Date
	30789	2023-11-06 08:09:55
	30792	2023-11-06 08:10:00
	30797	2023-11-06 08:10:24
	30808	2023-11-06 08:10:54
	30814	2023-11-06 08:08:40
	30814	2023-11-06 08:08:43
	30814	2023-11-06 08:08:45
	30820	2023-11-06 08:08:54
	30821	2023-11-06 08:09:43
	30831	2023-11-06 08:10:28
	30835	2023-11-06 08:09:27
	30835	2023-11-06 08:09:33

# Project Timeline

8. Imported website files (HTML, CSS, JS, PHP) into Apache htdocs.

9. Successfully launched the complete website.



Scan the QR Code  
below to mark your  
attendance.



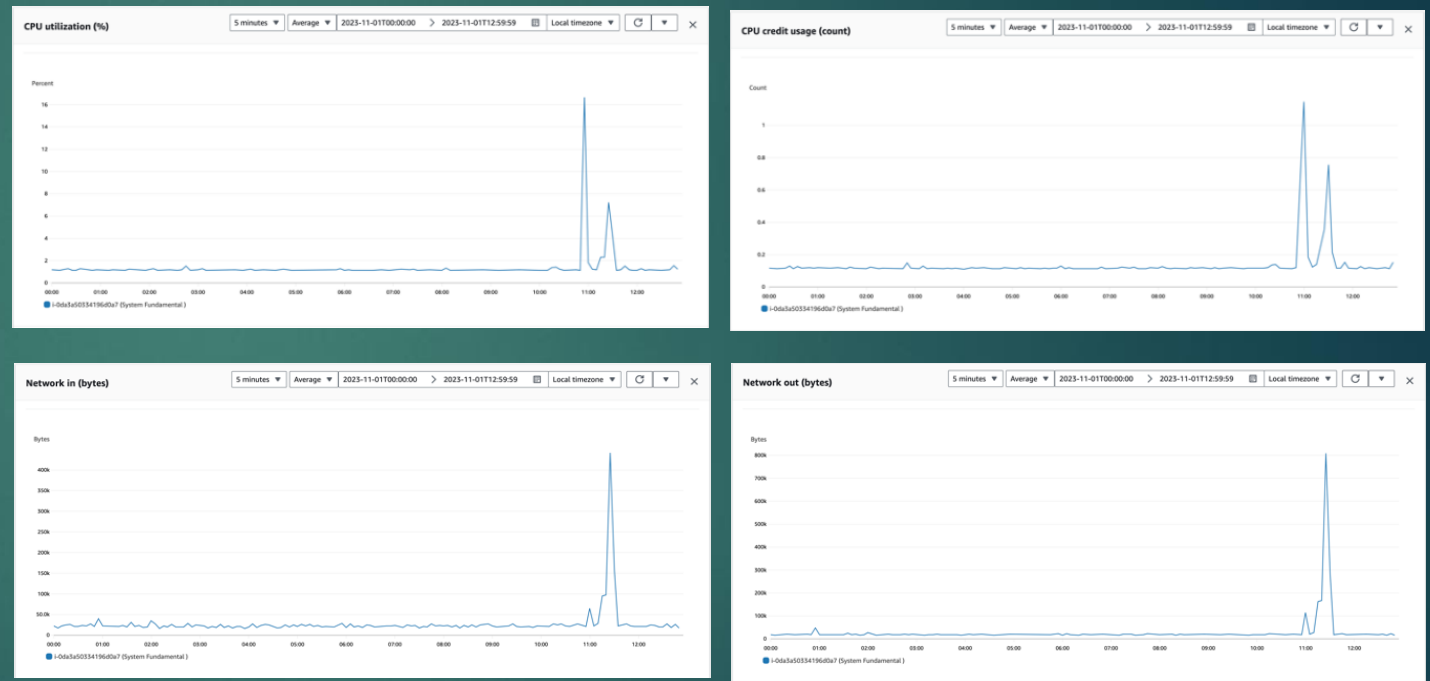
<http://13.49.245.125:8000/register.html>



# Performance Evaluation

1. Conducted performance evaluation for 50 students

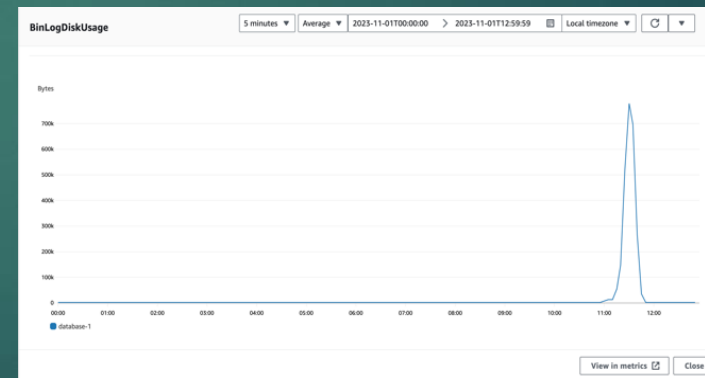
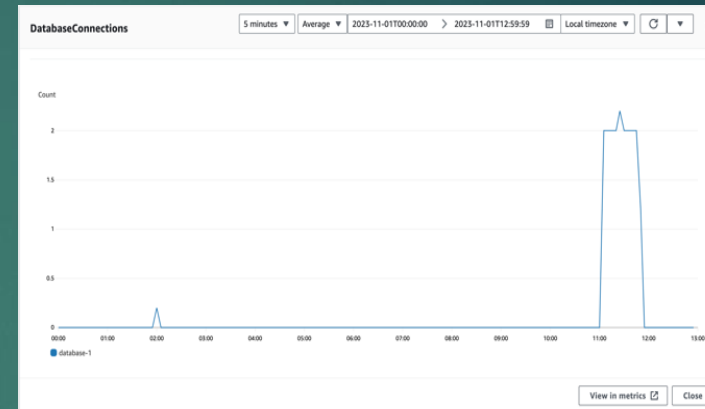
## Virtual Machine Performance



# Performance Evaluation

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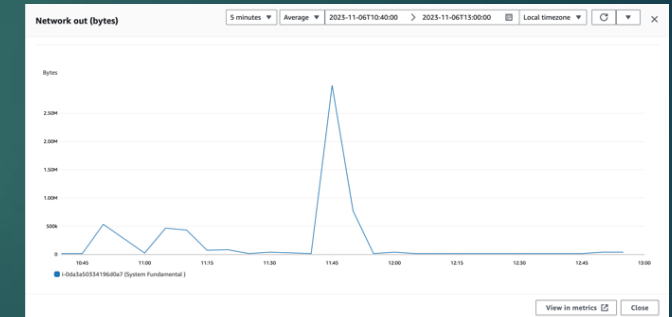
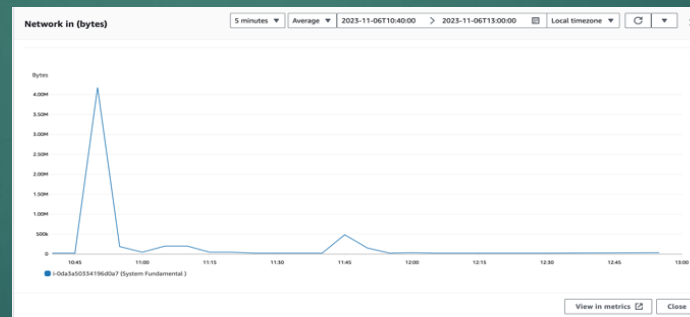
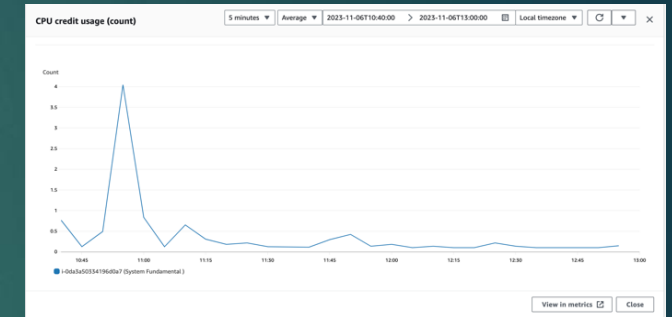
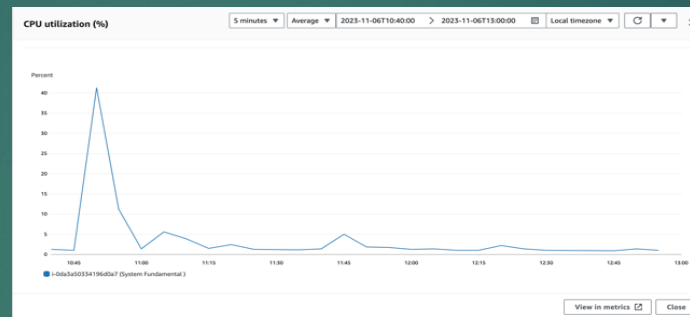
## Database Performance



# Performance Evaluation

2. Conducted performance evaluation for 150 students.

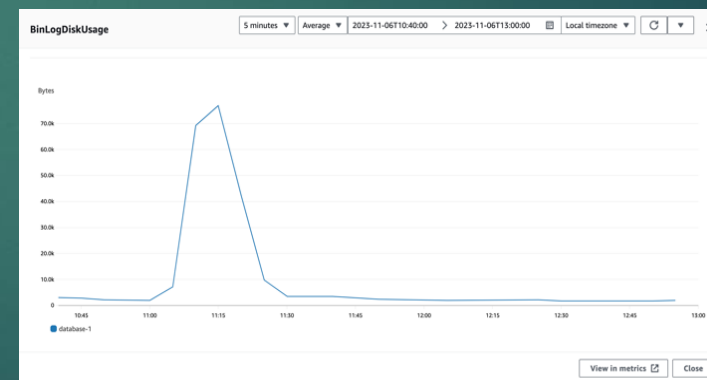
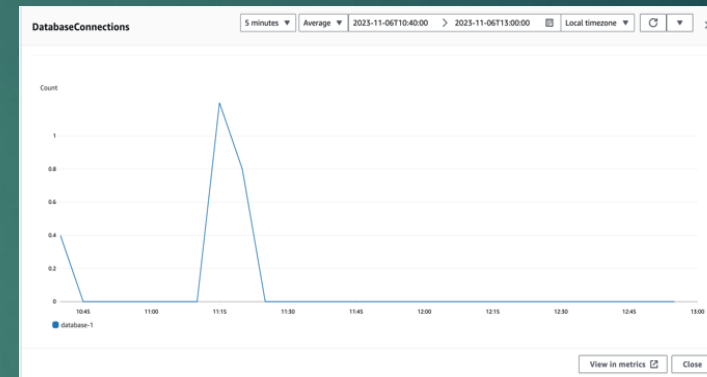
## Virtual Machine Performance



# Performance Evaluation

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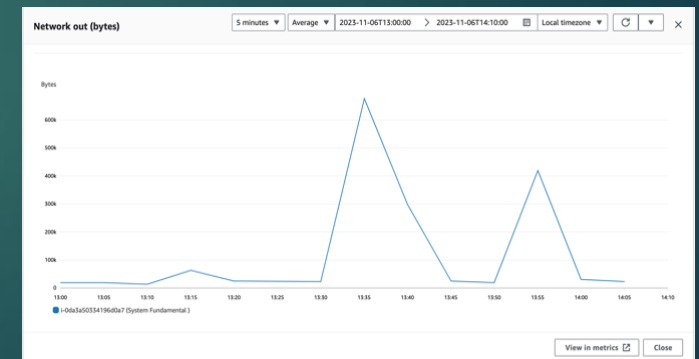
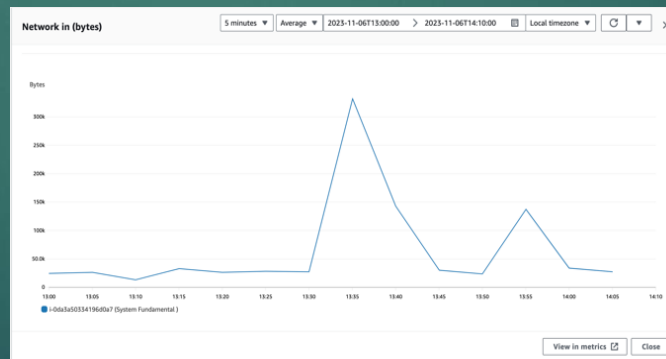
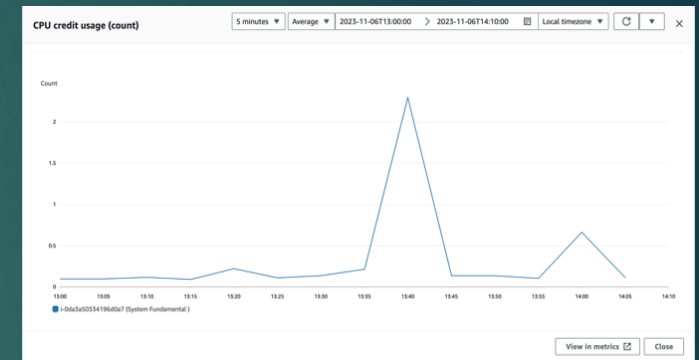
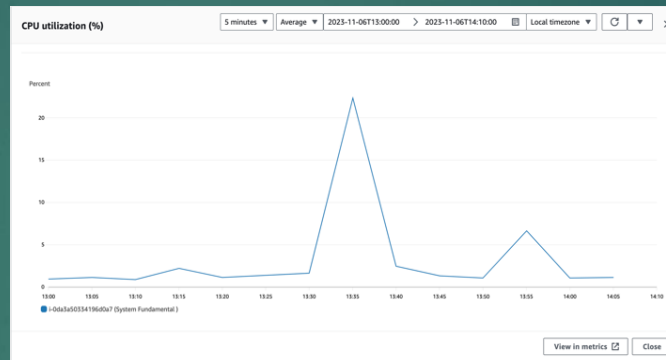
## Database Performance



# Performance Evaluation

3. Ran software (Anaconda Navigator) inside the host machine and collected performance. Conducted performance evaluation for 50 students.

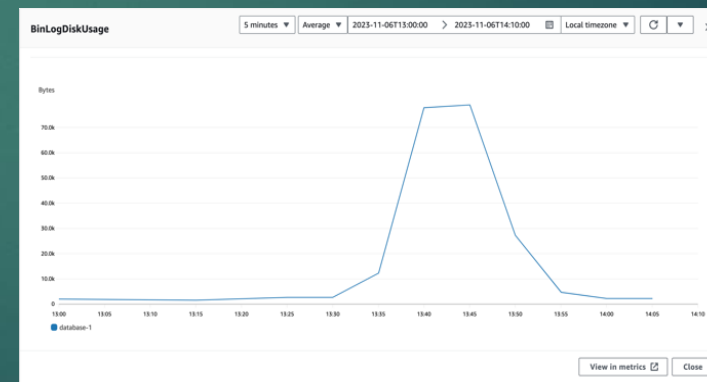
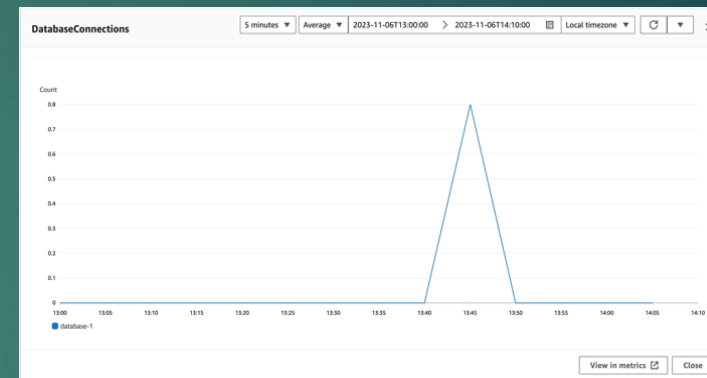
## Virtual Machine Performance



# Performance Evaluation

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## Database Performance



# Circumstances that faced difficulties in the project

- Inbound and Outbound port issues.
- AWS account was suspended.
- Enable the Apache server and connect PHP.
- Make the content responsive then target output is not able to show.

# Cost of the project

- An amount of USD 1.25 was spent on AWS Relational Database Service

## Charges by service

Amazon Web Services, Inc. (7)

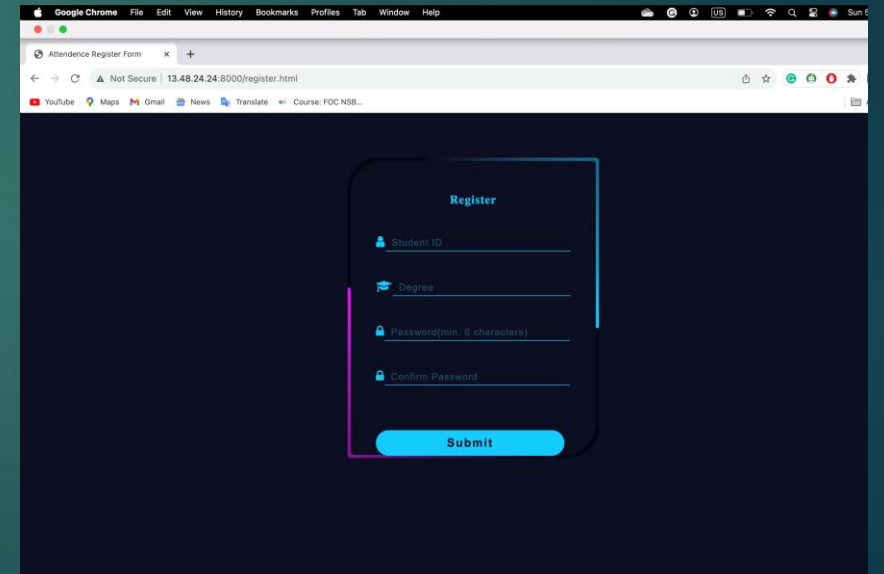
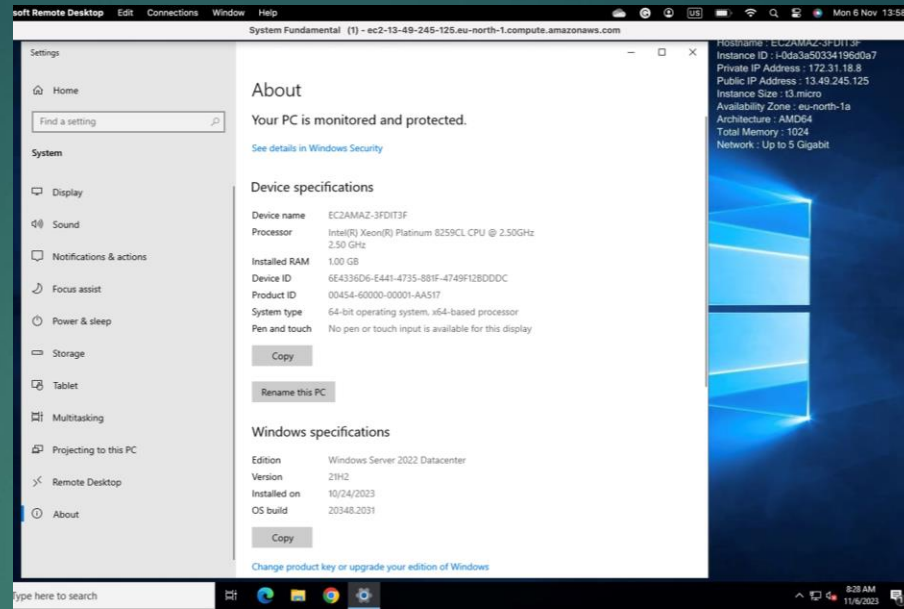
Total pre-tax **USD 1.25**

Description	Usage Quantity	Amount in USD
<b>Relational Database Service</b>		<b>USD 1.25</b>
<b>EU (Stockholm)</b>		<b>USD 1.25</b>
<b>Amazon Relational Database Service Backup Storage</b>		<b>USD 0.22</b>
\$0.09 per additional GB-month of backup storage exceeding free allocation running Oracle	0.001 GB-Mo	USD 0.00
USD 0.09 per GB-month of backup storage exceeding free allocation	2.45 GB-Mo	USD 0.22
<b>Amazon Relational Database Service for Oracle Enterprise Edition (BYOL)</b>		<b>USD 0.44</b>
USD 0.359 per db.m5.xlarge Single-AZ instance hour (or partial hour) running Oracle EE (BYOL)	0.134 Hrs	USD 0.05
USD 0.718 per db.m5.xlarge Multi-AZ instance hour (or partial hour) running Oracle EE (BYOL)	0.546 Hrs	USD 0.39
<b>Amazon Relational Database Service for Oracle Standard Edition Two (License-Included)</b>		<b>USD 0.08</b>
USD 0.466 per db.m5.large Single-AZ instance hour (or partial hour) running Oracle SE2 (LI)	0.167 Hrs	USD 0.08
<b>Amazon Relational Database Service Provisioned Storage</b>		<b>USD 0.51</b>
\$0.1 per IOPS-month of provisioned io1 IOPS running Oracle	0.539 IOPS-Mo	USD 0.05
\$0.12 per GB-month of provisioned gp2 storage running Oracle	0.022 GB-Mo	USD 0.00
\$0.13 per GB-month of provisioned io1 storage running Oracle	0.018 GB-Mo	USD 0.00
\$0.2 per IOPS-month of provisioned io1 IOPS for Multi-AZ deployments running Oracle	2.203 IOPS-Mo	USD 0.44
\$0.26 per GB-month of provisioned io1 storage for Multi-AZ deployments running Oracle	0.073 GB-Mo	USD 0.02
<b>CloudWatch</b>		<b>USD 0.00</b>
<b>EU (Stockholm)</b>		<b>USD 0.00</b>
<b>AmazonCloudWatch EUN1-TimedStorage-ByteHrs</b>		<b>USD 0.00</b>



# Project Methodology

- ▶ AWS services including EC2 instances and RDS
- ▶ implemented an Apache server with PHP and MySQL for database management.
- ▶ The website was developed using HTML, CSS, JS, and PHP files.



# Project Outcome

- ▶ The Fast QR Attendance System was successfully implemented, addressing the initial problem of system delays during attendance tracking. The system is now capable of handling attendance for a larger number of students efficiently and accurately

# Conclusion

- By leveraging AWS services and optimizing the system architecture, we have developed a robust solution for prompt student attendance tracking. This project not only resolves the identified problem but also demonstrates the scalability and reliability of cloud-based solutions in educational contexts.



**Thank You...**