

## Abdus Salam Islam Badhon

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### EDUCATION

**Bachelor of Science in Software Engineering (BSSE) - University of Dhaka** | 2022- 2026 | Current CGPA (Till 5<sup>th</sup> Semester): 3.43 / 4.00

HSC: 5.00 (Notre Dame College, Dhaka), 2021 | SSC: 5.00 (PKB School and College, Dhaka), 2019

### PROJECTS

**Store Management System** | C++ | **December 2023** | GitHub Link: <https://github.com/Badhon1401/spl1>

A terminal based simulation of management of a typical e commerce store. This project having features like shop owner and customer login, shopping cart management and shopping, order cancelation, giveaway, products stock management, products and customers stats. For efficient searching of items and customers details Trie data structure has been used.

**Mini Machine Learning Library** | C++ | **January 2025** | GitHub Link: <https://github.com/Badhon1401/DBMS-2>

This project implemented some of the machine learning algorithms like Decision Trees, KNN, K Means, Naïve Bayes, Data Cube and Rollup all using raw C++ without any third-party libraries. This project also includes some test data from txt files to show possible use cases.

**TimeWise – Productivity Web APP** | **Next.js, Spring Boot, Mongo DB** | **March 2025** | GitHub Link: <https://github.com/Badhon1401/SPL-2>

An AI integrated web app to manage productivity through collaborative task management. User can create roadmap of completing a particular goal using AI or by himself. He can track his progress of goals and different task and can use AI to analyse the current progress and performance reports. He can see the deep work analytics to gain insights about his peak productive hours. Users can create teams and perform a task collaboratively by updating the task completions status and seeing the tasks commit history to know who did what part of the task. They can also share feedback as well as invite others to join the task. Different stats and analytics regarding the task participation and completions will help the user to gain insights about his performance. Users can also create AI generated Sessions to perform tasks.

Proper Documentation is also done for this project like SRS including functional and nonfunctional requirements. Use case and Activity diagram, Database and class based, Behavioural modelling and data flow diagram. It also includes background, key features, challenges, future scope and user manual.

Libraries, Frameworks and Tools Used: React, Next.js, Shad Cn UI, Zod, Lucide react, Framer Motion, Radix UI, Next Themes, Tailwind CSS, Vs Code, Spring Security, Spring Data Mongo DB, Spring AI, JWT, Spring MVC, Spring Starter Mail, Maven, Lombok, IntelliJ, Postman, Atlas, Draw.io, Google Docs, GitHub

**AI Based Games** | Java | **May 2025** | GitHub Link: <https://github.com/Badhon1401/6th-Sem>

This project includes game implemented by using classical AI algorithms with raw java programming. For user interaction a spring boot-based server is used that host the game. For user interaction HTML CSS is used which is also served by the spring boot server. Currently Two Projects is done. First one is Connect 4. It is an online AI vs user game where the user can change the difficulties of the game and after the gameplay can see the game summary and the moves summary like bad or good moves. This project uses min max algorithm and alpha beta pruning to implement gameplay. The second project implement the Wumpus worlds problem. Which is implemented using logical reasoning and first order logic for Wumpus to reach its final decision and come back to the initial position by avoiding the pits and the monsters.

Tools Used: Spring Boot, Spring MVC, Thymeleaf, Java, HTML, CSS, JS

**Trello Clone Integration Testing** | Java, Selenium, JUnit | **May 2025** | GitHub Link: <https://github.com/Badhon1401/6th-Sem/tree/master>

This project implements the end-to-end integration testing of a web app which is a clone implementation of a popular task management tool called Trello. This project made using phoenix web framework and uses Postgres as db. Instead of running on the local system docker was used to run both the web app and the database and then testing cases were written and implemented on the Firefox web browser. Page Object Model (POM) was used for writing the test cases. A testing report was also made highlighting the test outcomes, recommendations, and conclusions.

**Distributed Library Management System** | Spring Boot, Postgres | **June 2025** | GitHub Link: <https://github.com/Badhon1401/6th-Sem-Distributed-System>

This Project implements the backend part a library management system where users can register, loan books, the admin can see user and book stats, and update book stocks. Initially the project was fully completed using monolith architecture. Later for better maintainability and performance the project is divided into four different spring boot projects namely user service, book service, loan service and stats service all communicating with themselves by rest Api calling. Then nginx is used for load balancing and routing. Docker was also used for virtualization.

Tools and Technologies Used: Spring Boot, Spring MVC, Postgres, Nginx, Docker, Postman, IntelliJ

**MediShop - A Pharmacy Management Tool** | Next.js, Spring Boot, Postgres | **Ongoing** | GitHub Link: <https://github.com/Badhon1401/MediShop>

This Project aims to lessen the manual activities of pharmacy shops medicine inventory and staff management. The system will give user and shop registration functionalities. The system will provide strong authorization support for different stakeholders like shop owner can remove admin, only admin can add medicine in the stock and only salesperson can take orders. AI will help the user to analyse statistical data and trends. Different manual activities like filling up order details or getting top rated medicine or evaluating what medicines to be add will be automated for better productivity. Uncle Bobs Clean Architecture will be followed throughout the project.

### REFERENCES

[Mridha Md. Nafis Fuad](#) | [fuad@iit.du.ac.bd](mailto:fuad@iit.du.ac.bd) | [https://iit.du.ac.bd/about\\_iit/individual\\_teacher/79](https://iit.du.ac.bd/about_iit/individual_teacher/79) | Lecturer, IIT, University Of Dhaka

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