

Zohaib Hassan

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EDUCATION

National University of Computer and Emerging Sciences, Islamabad

Bachelor of Science in Computer Sciences

Aug. 2022 – Ongoing

EXPERIENCE

Software Internship – Teresol Pvt. Ltd. Islamabad(On-site)

June 2024 – Aug 2024

- Architected a **Vue.js Finite State Machine (FSM)** to manage complex user sessions and ensure data consistency.
- Built scalable, reusable UI components using **Component-Based Architecture**, mirroring Salesforce LWC patterns.
- Implemented **Vuex state management**, reducing redundant API calls and boosting performance by 30%.

Technical Content Writer – VeryAliGaming (Remote)

Feb 2024 – May 2024

- Published gaming articles on the website
- Managed content workflows via **WordPress (CMS)**, ensuring SEO compliance and accuracy.

PROJECTS

Salesforce CRM Prototype | *Apex, SOQL, Salesforce Platform*

- Modelled an 'Order-to-Cash' workflow in a Developer Org, writing Apex Triggers to automate contact synchronization.
- Implemented Bulkified SOQL queries to process records efficiently, strictly adhering to Salesforce Governor Limits.

Prime Fitness Gym Management System | *Java(JavaFX), JDBC, Springtool, MySQL*

- Engineered a **Multi-Tier Client-Server architecture**, separating UI logic from database operations (MVC Pattern).
- Implemented **JDBC connectivity** to execute complex SQL queries for member tracking, similar to Salesforce integration patterns.
- Applied **GRASP design patterns** (High Cohesion, Low Coupling) to ensure scalable and maintainable code.

Online Library Management System | *Vue.js, HTML, CSS, JavaScript, Firebase*

- Designed a **relational data schema** in Firebase to handle inventory and user borrowing history (**CRUD Operations**).
- Implemented **State Management (Vuex)** to handle complex user sessions, ensuring data consistency across the application.
- Enforced **Role-Based Access Control (RBAC)** to securely separate admin privileges from student access.

TORCS Racing Simulator | *Python, Machine Learning (MLP Regressor)*

- Developed an autonomous racing agent using **MLP Regressors**, training datasets to optimize driving trajectories.
- Built a data pipeline to **clean and normalize** sensor inputs before feeding them into the neural network.

Game Engine Development | *C++, Assembly, OOP*

- **Plants vs. Zombies:** Architected a game engine using **C++ Polymorphism**, managing diverse entity behaviours via inheritance.
- **Pacman:** Optimized low-level memory usage by developing a clone in **Assembly (x86)**, managing 32-bit registers directly

TECHNICAL SKILLS

- **Languages:** C++, Java (JDBC/JavaFX), JavaScript, SQL, **Apex (Basic)**, Python.
- **Web & Database:** Vue.js, HTML/CSS, Firebase, MySQL, **SOQL**, Lightning Web Components (**LWC**) Concepts.
- **Core Concepts:** OOP, Multi-Tier Architecture, Data Structures, **GRASP Patterns**, SDLC.