

# Portfolio

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## SaaS Application: Tournament Organizer — Group project (Sponsor: Amazon)

2022-01 - 2022-04

**Skills:** Java, React.js, Postgre, AWS

**Description:** This project builds a solution to allow easy administration of multiple tournaments with the ability for amazon employees to self-register and share availability based on format of specific tournaments.

**Role:** Front-end Manager

- Design layouts for a website using Figma
- Components
  - Show calendar for tournaments
  - Listing/Creating/Deleting Tournaments
  - Listing/Getting/Creating/Joining/Managing teams
  - Generating/Managing schedules
  - Recording/Getting Match
- Collaborating with back-end teammates to manage REST API

**Github:**

- Front-end: [https://github.com/chunga7879/tournament\\_organizer\\_frontend\\_version2](https://github.com/chunga7879/tournament_organizer_frontend_version2)
- Back-end: [https://github.com/chunga7879/tournament\\_organizer\\_backend\\_version2](https://github.com/chunga7879/tournament_organizer_backend_version2)

## Maven Admin — JNPMEDI Inc

2022-06 ~ 2022-08

**Skills:** React.js, Flex (Frontend-framework), REST API, SCSS

**Description:** It is to provide functionality for admin to manage privileges for products the company owns. Users who have certain privileges can access the products and view/change data. For example, if the company own the product, Maven-Auth, a user who has privilege, Auth\_View, can view data stored in the database in the product and a user who has privilege, Auth\_Grant, can create/update new data. There are two ways that user can have a privilege. One is to get a privilege directly from admin. The other is to have a role which contains certain privileges. The project is to provide a website to see users' information and give/remove certain privileges or roles to users.

**Role:** Project Engineer

- Login and Logout process including token management
- Component to manage user's privileges
  - API call to get privileges by user Id
  - Display checkbox with item (key: privilege, default checked: included in the response from api call)
  - Update user's privileges using useState with an array of {privilege, grant}. If the grant is true, it adds a privilege to user. Otherwise, it removes a privilege from user.
- Component to manage roles
  - List up all roles with pagination by calling api.
  - Create role with unique name and checkbox for privileges
  - View roles' information by calling api with role id.
- Component to manage user's role
  - Show checkboxes for all roles and default check by role what a user already has.
  - Update user's role using useState with an array of {roleId, grant}
- Component to track audit trails for users
  - Display all audit trails for users with user's email, name, date and other information
  - Filtering/Searching functionality for each column to display only certain trails

## Maven Auth — JNPMEDI Inc

2022-06 ~ 2022-08

**Skills:** Typescript, Cyan (Backend-framework), MySQL

**Description:** It is to manage users' information such as account information, users' privileges, roles and organizations. It can create/update/delete users and create organizations and invite users for the organization. It provides REST API for Maven\_Admin project.

**Role:**

- Design Layered Architecture (schema(entity), model, service, controller) for User, User's privilege, Role, User's Role and Ref Audit to track audit trail.
- Rest API
  - Get user by id/authorization
  - List users with pagination
  - Get user's privileges by id/authorization
  - Patch privileges to users with id and list of {privilege, grant: whether to add or to remove}
  - Create a Role with unique name and privileges as optional. It creates RolePrivilege entities to manage relationship between role and privileges.
  - Delete role by role id
  - Patch name or privileges to roles. It changes a name or creates a new RolePrivilege entity or changes isDestroyed attribute for RolePrivilege entity.
  - Get user's roles by user id/authorization
  - Patch roles to users with user id and list of {roleId, grant}
  - List of audit trails with pagination and with filtering functionality.

## Image Animation Creator DSL — Group project

2022-09 – 2022-10

**Skills:** Java

**Description:** This project builds domain specific language to allow users to modify images and combine multiple images to create animated gif.

**Role:**

- Implementing built-in functions for image manipulation
- Conducting user study

**Github:** <https://github.com/chunga7879/AnimatedGifDSL>

## Program Analysis: Runtime Error & Possible Input — Group project

2022-11 – 2022-12

**Skills:** Java

**Description:** It is static program analysis that tracks the potential domain of local variables, parameters and return values throughout a single method to check whether any runtime errors can occur. The analysis will output a control flow diagram indicating locations where an error can occur.

**Role:**

- Implementing visualization methods for an output control flow diagram
- Conducting user study

**Github:** <https://github.com/chunga7879/ProgramAnalysis>

## Maven Safety — JNPMEDI Inc

2022-08 ~ 2022-08

**Skills:** Typescript, React.js, Cyan (Backend-framework), Flex(Frontend-framework), MySQL

**Description:** It is to provide a website for recording all information on each subject in a clinical research study.

**Role:**

- Refactoring to make cleaner code
- Adding some scss and small components to improve design
- Creating REST API for listing up audit trails for case captures with pagination/filtering
- Components to provide functionality to see audit trails/comments and delete/strike rows for each item
- Components to show audit trails with filtering
- Components to remove/strike items

## **Maven Board — JNPMEDI Inc**

2022-05 ~ 2022-05

**Skills:** Typescript, React.js, Cyan (Backend-framework), Flex(Frontend-framework), MySQL

**Description:** It is to make a website to provide a board functionality such as listing/creating/deleting/updating articles and allowing other users to write comments for each articles. It uses Jwt/Bcrypt to provide secure signup and login process.

**Role:** Design Layered architecture, and creating REST API and components.

## **Grade Management — Individual project**

2022-03 - 2022-04

**Skills:** Node.js, React.js, MySQL, AWS

**Description:** It is to help students to manage grades easily. It allows students to create tasks (ex. midterm) and write what percentage the task contributes to the course grade (40% among 100%) and the number of subtasks 3 midterms). When submitting each grade for subtasks, it calculates the grade for the related task, course, and semester.

**Github:**

- Front-end: [https://github.com/chunga7879/grade\\_project\\_front\\_end](https://github.com/chunga7879/grade_project_front_end)
- Back-end: [https://github.com/chunga7879/grade\\_project\\_back\\_end](https://github.com/chunga7879/grade_project_back_end)

## **Course/Room Data Management — Group project**

2021-09 - 2021-12

**Skills:** Typescript, Html, CSS

**Description:** This is the software engineering project which helps to add and delete data and get information from the data using query and get the lists methods. It adds files about courses and rooms information at UBC and explore the data using query. By using REST APIs, it can accomplish end-to-end user stories

**Role:**

- Creating simple website using html and css
- Implementing function for query, add, delete, list data by cooperating with a partner

**Github:** <https://github.com/chunga7879/CourseRoomManagement>

## **Database Web Programming — Group project**

2021-09 - 2021-12

**Skills:** PHP, MySQL

**Description:** This is a simple project to design an ER diagram for TV program and provide a simple website to query/add/delete data.

**Role:**

- Designing ER diagram
- Writing SQL statements and Implementing PHP code.

**Github:** <https://github.com/chunga7879/tvShowSQLproject>

## **Department Store Management System — Individual project**

2021-01 - 2021-04

**Skills:** Java

**Description:** This is to provide the application to manage information of customers and products of the department store.

**Github:** <https://github.com/chunga7879/storeDataManageJava>