Software Requirement Specification

for

Tribia All Hands Meet-Module 7: Awards Management System

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1. Introduction

1.1 System Description

Litmus7 is hosting an exciting all-hands event called **Tribia**—an annual gathering where the entire company comes together to connect, learn, and celebrate achievements. **Tribia** is packed with engaging sessions, networking opportunities, and memorable experiences. Attendees will enjoy customized welcome kits, comfortable accommodations, and a range of delicious meals catered to their preferences. A seamless experience is critical, from booking rooms and shuttles to organizing events and collecting feedback afterward. This project will serve as the digital backbone of **Tribia**, coordinating every detail to make the event unforgettable for everyone involved.

1.2 System Scope

- The system enables management of event which include attendee registration, travel arrangement management, and real-time tracking of participant status and transportation preferences.
- The system facilitates session management, automates waitlist-based registration, prevents scheduling conflicts and notifies users about registration updates and changes.
- Ensuring seamless accommodation management, the system handles room bookings and allocations by considering attendee preferences, availability, and organization criteria, while also generating structured reports for hotel coordination.
- This system also facilitates seamless event and session check-ins, manages welcome kit distribution based on user preferences and generates detailed reports for attendance tracking and inventory management.
- The system coordinates venue transportation by managing schedules, optimizing pickup points within a defined radius and generating allocation plans to ensure efficient travel arrangements for attendees.
- The system enables structed award nominations, fair voting mechanisms and automated winner selection. Also, it provides a feed for payroll processing for monetary awards.

1.3 Intended Audience

The intended audience of this document include:
- Project Team: Developers, Testers, Project Managers
- Stake Holders: Company Management and Executives

1.4 Module Scope

The awards and nomination management module enables admins to create award categories, define eligibility criteria and nominate people for recognition. It allows both single and multiple winner categories, allowing admins to set voting parameters. The system ensure fair selection process by providing necessary details for voters. Additionally it streamlines award distribution by establishing structured guidelines for recognizing achievements within the organization.

1.5 Assumptions

- For every award category in an event there is only a single panel for voting (applicable only for panel-based voting).

- Both the admin and managers can nominate employees for an award category.

- Managers can nominate any number of employees, but the admin must approve the nominees.

- Awards eligibility criteria is based on point system. The admin sets the minimum points required for each award category.

- Employee points are considered out of 10 based on the previous year rating.

- The number of nominees for each category is fixed by the admin.

- There are two type of voting mechanism:

  - Account-based voting.

  - Panel-based voting.

- The user module designed specifically for this system and its functionality.

- Each employee must belong to a single account, but a manager can manage multiple accounts.

- The manager can only nominate employee from his account.

1.6 Definitions and Acronyms

- **API** - Application programming interface

- **BCrypt** - Blowfish cipher crypt

- **CSRF** - Cross-Site Request Forgery

- **RESTful** - Representational State Transfer

2. Functional Requirements

2.1 Login for Users

User must provide their email and password and should be able to login if their role is admin.

Acceptance Criteria:
1. Users must be prompted for email and password.
2. The user must be able to login only if his role is admin.
3. Required user details are retrieved upon successful login.

2.2 Award Category Management

The system allows only admin to manage award category. Each award has associated parameters like name of the award category, description of the award category, no.of winners, maximum no.of nominees, minimum employee points, award type (individual or team) , voting mechanism (panel based or account based) and gifts for winners.

Acceptance Criteria:
1. Only admins can manage.
2. Only positive number is allowed for number of winners, number of nominees and employee points.
3. All data must be valid.
4. No.of winners should not be greater than no.of nominees.
5. Award name must be unique.
6. Voting mechanism would be either panel based or account based.

2.3 Nomination Management

Admin and manager can nominate employee/team for award. When manager nominates employees for an award, the nomination is created with a pending status. The nomination will await admin approval before it becomes final. Admin nominations are automatically approved.

Acceptance Criteria:
1. Only admins and managers can nominate employee/team for award.
2. If admin or manager tries to nominate the same employee for the same award more than once, the system will reject that nomination.
3. All data must be valid.
4. Managers can only nominate employee within their account.

2.4 Update nomination status of nominees for an award

The system allows the admin to update nomination status made by manager. When a manager nominates an employee, the nomination is initially in a pending status. The admin can approve or reject these nominations, after which the status of the nomination is updated accordingly.

Acceptance Criteria:
1. The nomination status can be updated only by admins.
2. If admin tries to approve the non-existing nomination, it should return Not found response.
3. All data must be valid.
4. If a nomination has already been approved or rejected, it is not possible to change the state again.

2.5 Winner gift

Each award can have multiple gifts associated with that. These gifts are given to the winners as part of the award recognition.

Acceptance Criteria:
1. Only admin can manage winner gift.
2. The gift name should be unique
3. All data must be valid.
4. The gift_amount should not be a negative number.

2.6 Voting panel members management

The admin can designate a specific number of members to form the panel responsible for voting. This ensures a structured and transparent voting process by allowing only the assigned panel members to participate in decision-making. The panel will be specific for that particular event.

Acceptance Criteria:
1. Only admin can manage winner gift.
2. The system should allow adding a panel member specific to that award.
3. All data must be valid.

2.7 User Data Management

The system maintains static data for users, roles, accounts and account managers, which are essential for the module's functionality. This data remains fixed and is not dynamically altered during regular system operations. Users are assigned specific roles that define their permissions and interaction within the system. Accounts and account managers are also predefined to ensure consistent functionality and seamless management.

2. Nonfunctional Requirements

2.1 Role based access control

Secure role-based access control to restrict admin, manager and employee privileges.
- Admin has the privileges to define award categories, set nomination/voting rules and approve/reject nominations and can resolve ties in voting results.
- Managers has the privileges to nominate employees for awards but requires admin approval.
- Panel members can participate in panel-based voting but cannot nominate people.
- Employee can vote in account-based voting mechanism if authorized.

2.2 Security Requirements

User authentication should be implemented using spring security, ensuring that passwords are securely hashed using a strong hashing algorithm such as BCrypt. To protect against security threats, the system should implement input validation along with CSRF protection.

2.3 Scalability & Performance

The system should be capable of handling higher user concurrency and ensuring consistent performance during peak usage periods. The system should efficiently manage resources to maintain optimal performance across all modules.

2.4 Maintainability & Modularity

API endpoints should be RESTful and well documented using OpenAPI(swagger). Code should follow best practices to ensure easy principles.

3. Other Requirements

3.1 Operational Environment

The implementation of this module is done using Spring Boot as backend along with MySQL as database. Also,external libraries are used as per requirement.

4. Future scope

1. Multiple eligibility criteria: currently, the system uses a point-based eligibility criteria for nominations. As a future enhancement, multiple eligibility criteria can be introduced, allowing for a more flexible and comprehensive selection process based on various factors such as performance ratings, peer reviews and tenure.