VIETNAM GENERAL CONFEDERATION OF LABOUR
TON DUC THANG UNIVERSITY
FACULTY OF INFORMATION TECHNOLOGY

Bui Huu Loc - 521H0504

FOSTERING CORPORATE CULTURE & ENGAGEMENT WITH SHOUT OUT

GRADUATION INTERNSHIP

COMPUTER SCIENCE

Staff Guidance **Nguyen Sy Dang**

Ho Chi Minh City, 2024.

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ACKNOWLEDGEMENT

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Fostering Corporate Culture & Engagement with Shout Out
Summary

The Shout Out App is crafted to enrich corporate culture and enhance employee engagement within organizations. Integrated seamlessly with Slack, this app empowers employees to send appreciation 'bread' to their colleagues, nurturing a positive work environment. Key features include personalized breads with tags, custom rewards via the 'Shout Out Shop,' leaderboards to foster friendly competition, and Shout Out TV for real-time recognition displays. The app also offers Pulse surveys to assess employee well-being and customizable stickers to personalize messages. Administrators can efficiently manage rewards, create custom tags, design surveys, and access comprehensive reporting and analytics. Through these robust features, the Shout Out App aims to cultivate a strong corporate culture, acknowledge employee contributions, and enhance overall communication within the company.

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Chapter 1

Overview of Linnoedge Joint Stock Company

1.1 Company Background

Linnoedge Joint Stock Company, abbreviated as Linnoedge JSC, was established on January 19, 2024, with its headquarters located at Room No. 3.40, The Prince Residence Commercial Area, 17-19-21 Nguyen Van Troi Street, Ward 11, Phu Nhuan District, Ho Chi Minh City, Vietnam. The company operates under the leadership of Mr. Shogo Harada as its representative.

Linnoedge JSC is registered under several business sectors, reflecting its comprehensive expertise in the technology industry:

1. Computer Programming
2. Computer Consultancy and Computer Systems Management
3. Information Technology Services and Other Related Services
4. Data Processing, Leasing, and Related Activities
5. Information Portals
6. Management Consultancy Activities

1.2 Company Mission and Vision

Linnoedge JSC prides itself on being an industry-leading outsourcing software development company committed to innovation and growth. The company's mission is to deliver cutting-edge solutions that address the unique business challenges of its clients, ensuring maximum value and cost-efficiency.

1.3 Core Business Offerings

1.3.1 Offshore Development Team (LABO)

Linnoedge JSC offers a specialized service known as LABO, providing clients with dedicated and professional development teams. These teams are tailored to meet specific business needs, offering flexibility in team size to accommodate varying project requirements. This service ensures reliable support and expertise for clients seeking to outsource their software development needs.

1.3.2   Web Development

The company excels in crafting intelligent and connected web solutions that are both effective and cost-efficient. Linnoedge JSC's web development services aim to enhance client visibility and engagement through innovative designs and seamless user experiences.

1.3.3   Mobile Development

Linnoedge JSC is proficient in developing robust and scalable native mobile applications for iOS and Android platforms. These applications are built to meet enterprise-grade standards, emphasizing security and performance while catering to diverse client needs across various industries.

Chapter 2

Introduction

2.1 Recap of Industrial Experience Requirement

In the first part of the report, I introduced the Shout Out App, an innovative tool designed to enhance corporate culture by fostering recognition and communication within organizations. The primary objectives of the Shout Out App include creating a strong corporate culture, discovering and spreading good company practices, understanding the real company situation through behavioral data, enabling the company to give recognition, increasing staff engagement, and improving internal communication using emojis.

I explored how the app leverages Slack as its platform, integrating recognition features directly into a widely used communication tool to ensure ease of access and adoption. This integration makes recognition a seamless part of daily workflows, enhancing user experience and encouraging frequent participation.

Key features of the Shout Out App were detailed, including sending breads (tokens of appreciation), tagging with custom values, custom rewards in the Shout Out Shop, leaderboards, Shout Out TV, Pulse surveys, and stickers. For administrators, additional features such as customizing the Shout Out shop and tags, managing stickers, creating custom surveys, and utilizing APIs for integrations were highlighted. The app also offers reporting and analytics to track engagement and recognition trends.

The objectives were elaborated upon, with in-depth discussions on creating a strong corporate culture, discovering and spreading good company practices, increasing staff engagement, and facilitating communication with emojis. Each objective illustrated how the Shout Out App enhances these aspects, contributing to a more cohesive, motivated, and engaged workforce.

The practical significance of the Shout Out App was examined, showcasing its potential to transform workplace dynamics, boost employee morale, and drive organizational success.

2.2 Overview of The report

This report delves deeper into the practical applications and extended functionalities of the Shout Out App, focusing on enhancing employee engagement and recognition within organizations. Building on the foundation laid in Industrial Experience Requirement Part, this section explores the app's advanced features and their impact on fostering a positive work environment. It examines how customizable recognition and rewards can be tailored to fit the unique culture and goals of different companies, ensuring that recognition is meaningful and aligned with organizational values. The report also highlights the app's integration capabilities, demonstrating how it can seamlessly blend with other tools and systems to streamline processes and maximize efficiency.

Additionally, this part of the report provides insights into the limitations of the technology and the challenges organizations might face when implementing the app. It discusses potential areas for improvement and future development to enhance the app's functionality and address these limitations. Through case studies and practical examples, the report illustrates the tangible benefits of using the Shout Out App, showcasing its ability to drive engagement, boost morale, and create a culture of continuous recognition and improvement. Overall, this aims to provide a comprehensive understanding of how the Shout Out App can be effectively utilized to enhance employee engagement and foster a thriving corporate culture.

Chapter 3

System analysis and design

3.1 Functional Requirement

Functional Requirement	Description
Send Bread	Allows users to send a thank you note along with an icon to their colleagues.
Send Bread with Tag	Enables users to add custom tags, such as #thankful, when sending breads to provide context and align with company values.
Custom Rewards (Shout Out Shop)	Organizations can create and manage custom rewards that users can redeem using their accumulated breads.
Leaderboards	Displays rankings of users based on bread giving and receiving, fostering friendly competition and highlighting top contributors.
Shout Out TV	Provides a live feed of bread activity, showcasing who is giving and receiving breads along with personalized messages.
Pulse Surveys	Allows users to send quick surveys to gauge team happiness and well-being, providing feedback on specific topics.
Manage Shout Out Shop	Admins can create unique rewards for the Shout Out Shop, which team members can redeem with their breads.
Manage Shout Out Tags	Admins can create and manage custom tags that reflect company values or goals.
Stickers	Admins can customize the sticker collection, uploading unique stickers or choosing from pre-made options. Enables admin to liven up their messages with fun and expressive stickers.

Functional Requirement	Description
Custom Surveys	Admins can create and distribute custom surveys with different question types to gather detailed feedback from the team.
Integration	Allows for the integration of other tools and platforms (e.g., Discord, Microsoft Teams) using APIs for seamless recognition activities.
Reporting and Analytics	Provides data dashboards and reports for admins to track engagement, bread-giving trends, and recognize top contributors.

Table 3.1: Functional Requirements for Shout Out App

3.2 Non-functional Requirement

Non-Functional Requirement	Description
Compatibility and Universality	The app must operate seamlessly on different devices and browsers, ensuring accessibility for all users.
Quick Responsiveness	The app should have fast response times and minimal latency to ensure a smooth user experience.
High Security	Protect user data, recognition messages, and reward transactions with robust security measures.
User-Friendly Interface	The app should be intuitive and easy to navigate, providing a pleasant and efficient user experience.
Scalability	The app must be able to handle growth in user numbers and activity levels without compromising performance.
Reliability	Ensure consistent performance and availability, minimizing downtime and errors.

Non-Functional Requirement	Description
Integration Capability	The app should support integration with other tools and platforms used by the organization, such as Discord and Microsoft Teams.
Maintainability	The app should be easy to update and maintain, allowing for efficient implementation of improvements and bug fixes.
Performance	The app must handle high volumes of bread transactions and data processing efficiently.
Data Privacy Compliance	The app must comply with relevant data protection regulations to ensure the privacy of user information.
Ease of Learning	The app should be designed such that new users can quickly understand its features and functionalities without extensive training.

Table 3.2: Non-Functional Requirements for Shout Out App

3.3 Functional Diagram of System

3.3.1 Use-Case Diagram
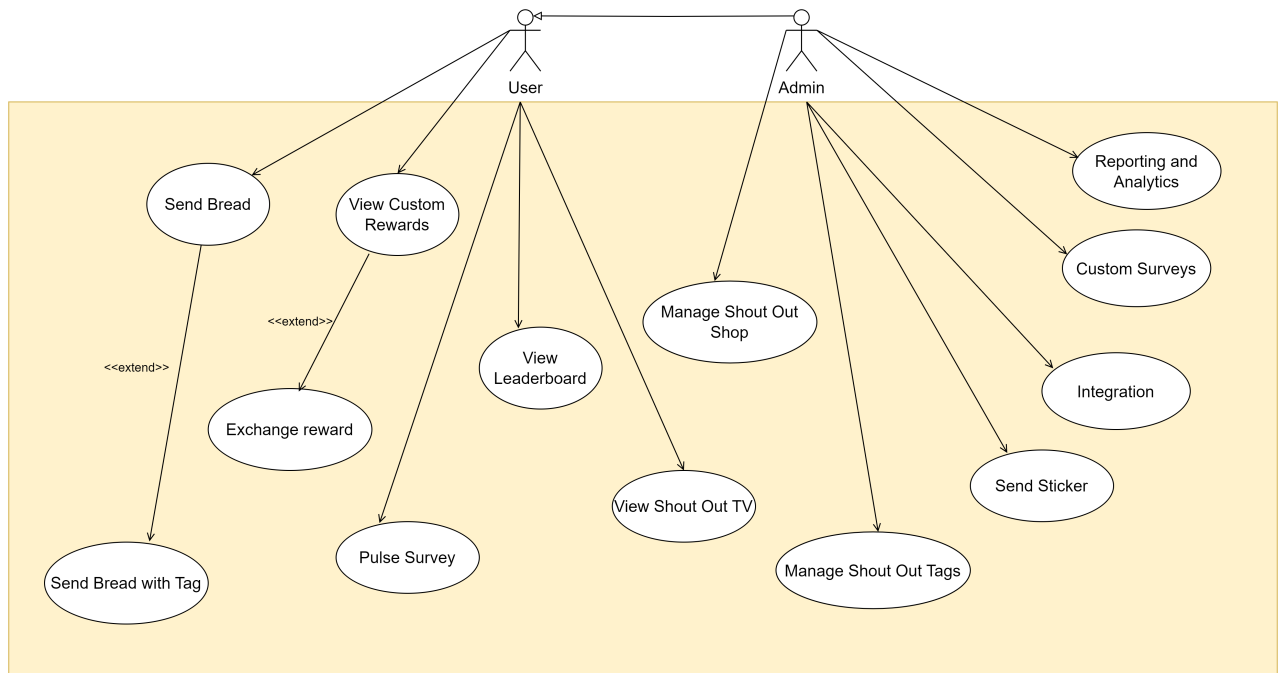
Figure 3.1: Use-case Diagram

3.3.2 Use-Case Description

There are 2 actors and 13 Use-cases.

ID	Use-Case	Description	Actor
UC01	Send Bread	Allows users to send a thank you note along with an icon to their colleagues	User
UC02	Send Bread with Tag	Enables users to add custom tags, such as #thankful, when sending breads to provide context and align with company values	User
UC03	View Custom Rewards	Users can view the available custom rewards that can be redeemed in the Shout Out Shop	User

ID	Use-Case	Description	Actor
UC04	Exchange Reward	Users can redeem their accumulated breads for various custom rewards created by the organization	User
UC05	Pulse Survey	Allows users to send quick surveys to gauge team happiness and well-being, providing feedback on specific topics	User
UC06	View Leaderboard	Displays rankings of users based on bread giving and receiving, fostering friendly competition and highlighting top contributors	User
UC07	View Shout Out TV	Provides a live feed of bread activity, showcasing who is giving and receiving breads along with personalized messages	User
UC08	Manage Shout Out Tags	Admins can create and manage custom tags that reflect company values or goals	Admin
UC09	Manage Shout Out Shop	Admins can create unique rewards for the Shout Out Shop, which team members can redeem with their breads	Admin
UC10	Send Sticker	Allows users to liven up their messages with fun and expressive stickers	User
UC11	Integration	Allows for the integration of other tools and platforms (e.g., Discord, Microsoft Teams) using APIs for seamless recognition activities	Admin
UC12	Custom Surveys	Admins can create and distribute custom surveys with different question types to gather detailed feedback from the team	Admin

ID	Use-Case	Description	Actor
UC13	Reporting and Analytics	Provides data dashboards and reports for admins to track engagement, bread-giving trends, and recognize top contributors	Admin

Table 3.3: List of Use-Cases of Shout Out App

ID	UC01
Use-Case Name	Send Bread
Actors	User, Admin
Primary Actors	User
Brief Description	Allows users to send a thank you note along with an icon (bread) to their colleagues. This feature fosters a culture of appreciation and recognition within the organization.
Trigger	
Relationships	
Flow	1. The user selects a colleague to send bread to. 2. The user writes a thank you note and optionally adds a tag (e.g., #thankful). 3. The user clicks the "Send" button. 4. The system sends a notification to the selected colleague with the thank you note and bread icon. 5. The system updates the leaderboard and activity feed to reflect the new bread sent.
Subflows	

Table 3.4: Use-Case: Send Bread

ID	UC02
Use-Case Name	Send Bread with Tag
Actors	User, Admin
Primary Actors	User
Brief Description	Enables users to send a thank you note along with an icon (bread) and add custom tags (e.g., #thankful) to provide context and align with company values. This feature helps categorize and emphasize the reasons for appreciation.
Trigger	
Relationships	
Flow	1. The user selects a colleague to send bread to. 2. The user writes a thank you note. 3. The user selects or enters a custom tag (e.g., #thankful, #teamwork). 4. The user clicks the "Send" button. 5. The system sends a notification to the selected colleague with the thank you note, bread icon, and the selected tag. 6. The system updates the leaderboard and activity feed to reflect the new bread sent with the tag.
Subflows	

Table 3.5: Use-Case: Send Bread with Tag

ID	UC03
Use-Case Name	View Custom Rewards
Actors	User, Admin
Primary Actors	User
Brief Description	Allows users to view the available custom rewards that can be redeemed using their accumulated breads. This feature helps users see the incentives for their contributions and engagement.
Trigger	User clicks the "Shout Out Shop" button on the website
Relationships	
Flow	1. The user navigates to the Shout Out App website. 2. The user clicks on the "Shout Out Shop" menu. 3. The system displays a list of available custom rewards that can be redeemed with accumulated breads. 4. The user can browse through the rewards, view details, and check the number of breads required for each reward.
Subflows	

Table 3.6: Use-Case: View Custom Rewards

ID	**UC04**
Use-Case Name	Exchange Reward
Actors	User, Admin
Primary Actors	User
Brief Description	Allows users to redeem their accumulated breads for various custom rewards created by the organization. This feature incentivizes positive behavior and engagement by offering tangible rewards.
Trigger	User clicks the "Redeem" button next to a reward
Relationships	
Flow	1. The user navigates to the "Shout Out Shop" within the Shout Out App website. 2. The user views the list of available custom rewards. 3. The user selects a reward they wish to redeem. 4. The user clicks the "Redeem" button next to the selected reward. 5. The system verifies if the user has enough breads to redeem the reward. 6. If sufficient breads are available, the system deducts the required number of breads from the user's balance. 7. The system confirms the reward redemption and provides details on how the user will receive the reward.

Subflows	- If the user does not have enough breads, the system displays an error message indicating insufficient balance. - The user can navigate back to the rewards list to choose a different reward or continue accumulating breads.

Table 3.7: Use-Case: Exchange Reward

ID	UC05
Use-Case Name	Pulse Survey
Actors	User
Primary Actors	User
Brief Description	Allows users to fill out quick surveys created by admins to gauge team happiness and well-being, providing feedback on specific topics. This feature helps monitor the overall sentiment within the team.
Trigger	User receives a notification to fill out a Pulse Survey
Relationships	
Flow	1. The user receives a notification about a new Pulse Survey. 2. The user clicks on the notification or navigates to the "Pulse Survey" section within the Shout Out App. 3. The user views and fills out the survey questions. 4. The user submits the completed survey. 5. The system confirms the submission and updates the response status for the admin's review.
Subflows	

Table 3.8: Use-Case: Pulse Survey

ID	**UC06**
Use-Case Name	View Leaderboard
Actors	User, Admin
Primary Actors	User
Brief Description	Displays the rankings of users based on the number of breads given and received. This feature fosters friendly competition and highlights top contributors in the organization.
Trigger	User use command "leaderboard"
Relationships	
Flow	1. The user types "leaderboard" to channel that has the Shout Out App. 2. The system sends a link that displays the current leaderboard, showing rankings based on the number of breads given and received. 3. The user views the top contributors and their bread counts. 4. The user can also see their own position in the rankings.

Subflows	• If there are no breads given or received yet, the system displays a message indicating that the leaderboard is empty.
	• The user can filter the leaderboard by time periods (e.g., daily, weekly, monthly) if such options are available.

Table 3.9: Use-Case: View Leaderboard

ID	UC07
Use-Case Name	View Shout Out TV
Actors	User
Primary Actors	User
Brief Description	Displays a live feed of bread activity, showcasing who is giving and receiving breads along with personalized messages. This feature serves as a digital celebration of the team's achievements and appreciation.
Trigger	User clicks the "View Shout Out TV" button
Relationships	
Flow	1. The user navigates to the "Shout Out TV" tab on the Shout Out App dashboard. 2. The user clicks on the "View Shout Out TV" button. 3. The system retrieves and displays the live feed of bread activities. 4. The user views the real-time updates of who is giving and receiving breads, along with their personalized messages.
Subflows	• If there are no recent bread activities, the system displays a message indicating that there are no activities to show.

Table 3.10: Use-Case: View Shout Out TV

ID	**UC08**
Use-Case Name	Manage Shout Out Shop
Actors	Admin
Primary Actors	Admin
Brief Description	Allows admins to create, edit, and delete custom rewards that users can redeem with their accumulated breads. This feature helps maintain an engaging rewards system aligned with organizational goals and values.
Trigger	Admin clicks the "Manage Shout Out Shop" menu
Relationships	

Flow	
	1. The admin navigates to the "Shout Out Shop" menu within the Shout Out App dashboard.
	2. The admin clicks on the "Manage Shout Out Shop" button.
	3. The system displays the list of existing rewards.
	4. The admin can create a new reward by clicking the "Add Reward" button.
	(a) The admin fills out the reward details (e.g., name, description, number of breads required).
	(b) The admin clicks "Save" to add the new reward.
	5. The admin can edit an existing reward by clicking the "Edit" button next to a reward.
	(a) The admin updates the reward details as needed.
	(b) The admin clicks "Save" to apply the changes.
	6. The admin can delete an existing reward by clicking the "Delete" button next to a reward.
	(a) The system asks for confirmation before deleting the reward.
	(b) The admin confirms the deletion.
	(c) The system removes the reward from the list.

Subflows	- If the admin tries to delete a reward that is currently being redeemed, the system displays a warning and prevents the deletion. - The admin can view analytics on reward redemptions to adjust reward offerings based on popularity and engagement.

Table 3.11: Use-Case: Manage Shout Out Shop

ID	**UC09**
Use-Case Name	Manage Shout Out Tags
Actors	Admin
Primary Actors	Admin
Brief Description	Allows admins to create, edit, and delete custom tags that users can use when sending breads. This feature helps to categorize and align recognition with company values and goals.
Trigger	Admin clicks the "Manage Shout Out Tags" menu
Relationships	

Flow	
	1. The admin navigates to the "Shout Out Tags" section within the Shout Out App.
	2. The admin clicks on the "Manage Shout Out Tags" button.
	3. The system displays the list of existing tags.
	4. The admin can create a new tag by clicking the "Add Tag" button.
	(a) The admin enters the tag name and description.
	(b) The admin clicks "Save" to add the new tag.
	5. The admin can edit an existing tag by clicking the "Edit" button next to a tag.
	(a) The admin updates the tag details as needed.
	(b) The admin clicks "Save" to apply the changes.
	6. The admin can delete an existing tag by clicking the "Delete" button next to a tag.
	(a) The system asks for confirmation before deleting the tag.
	(b) The admin confirms the deletion.
	(c) The system removes the tag from the list.

Subflows	• If the admin tries to delete a tag that is currently being used, the system displays a warning and prevents the deletion. • The admin can view analytics on tag usage to adjust the available tags based on their popularity and relevance.

Table 3.12: Use-Case: Manage Shout Out Tags

ID	**UC10**
Use-Case Name	Send Sticker
Actors	Admin
Primary Actors	Admin
Brief Description	Allows admins to send stickers to users as a form of recognition. Admins can include multiple breads with the sticker to emphasize appreciation.
Trigger	Admin clicks the "Sticker" menu
Relationships	
Flow	1. The admin navigates to the "Sticker" menu within the Shout Out App dashboard. 2. The admin clicks on the "Send Sticker" button. 3. The system displays a list of available stickers. 4. The admin selects a sticker to send. 5. The admin enters the recipient's information (e.g., username). 6. The admin specifies the number of breads to include with the sticker. 7. The admin adds a personalized message (optional). 8. The admin clicks "Send" to deliver the sticker and breads to the recipient. 9. The system confirms the delivery and updates the recipient's bread count.

Subflows	
	• If the admin selects an invalid recipient, the system displays an error message.
	• The admin can choose to send the sticker and breads to multiple recipients at once.

Table 3.13: Use-Case: Send Sticker

ID	**UC12**
Use-Case Name	Custom Surveys
Actors	Admin
Primary Actors	Admin
Brief Description	Allows admins to create, distribute, and manage custom surveys with various question types to gather detailed feedback from the team.
Trigger	Admin clicks the "Custom Surveys" button
Relationships	

Flow	
	1. The admin navigates to the "Custom Surveys" menu within the Shout Out App dashboard.
	2. The admin clicks on the "Create Survey" button.
	3. The system displays a form for creating a new survey.
	4. The admin enters the survey title, description, and selects the question types (e.g., multiple choice, open-ended).
	5. The admin adds the questions and possible answer options.
	6. The admin sets the survey distribution parameters (e.g., target audience, distribution date).
	7. The admin reviews the survey details and clicks "Save" to create the survey.
	8. The system confirms the survey creation and schedules it for distribution.
	9. The admin can monitor survey responses and analyze the results from the "Custom Surveys" section.

Subflows	- If the admin wants to edit an existing survey, they can click the "Edit" button next to the survey in the "Custom Surveys" section. - The admin can delete a survey by clicking the "Delete" button next to the survey, with a confirmation prompt before deletion.

Table 3.14: Use-Case: Custom Surveys

ID	**UC13**
Use-Case Name	Reporting and Analytics
Actors	Admin
Primary Actors	Admin
Brief Description	Allows admins to access and analyze data through insightful dashboards and reports. This helps measure team engagement, track bread-giving trends, and recognize top contributors.
Trigger	Admin clicks the "Reporting and Analytics" button
Relationships	

Flow	
	1. The admin navigates to the "Reporting and Analytics" section within the Shout Out App. 2. The admin clicks on the "View Reports" button. 3. The system displays various report categories (e.g., team engagement, bread-giving trends, top contributors). 4. The admin selects a report category to view. 5. The system generates and displays the selected report, including relevant data visualizations (e.g., charts, graphs). 6. The admin can apply filters to the report (e.g., date range, department). 7. The admin can export the report data in various formats (e.g., CSV, PDF). 8. The admin can set up automated report generation and distribution at regular intervals.
Subflows	
	• If the admin needs more detailed analysis, they can drill down into specific data points by clicking on relevant sections of the report. • The admin can create custom reports by selecting specific data points and metrics.

Table 3.15: Use-Case: Reporting and Analytics

3.4 Entity Relationship Diagram (ERD)

- **Analytics**

  - Contains user engagement data such as `breads_given`, `breads_received`, `surveys_taken`, and `rewards_redeemed`.

  - **Relationships**:

    * Belongs to a user (one-to-many relationship with Users).

- **Breads**

  - Records the details of "breads" (shout-outs) given between users, including the sender, receiver, and optional tag.

  - **Relationships**:

    * Each bread is sent by one user (many-to-one relationship with Users).
    * Each bread is received by one user (many-to-one relationship with Users).
    * Each bread can be associated with one tag (many-to-one relationship with Tags).

- **Integrations**

  - Manages integration details with various platforms, storing platform name and API key.

  - **Relationships**: None explicitly defined.

- **Leaderboards**

  - Tracks leaderboard standings based on `breads_given` and `breads_received`.

  - **Relationships**:

    * Each leaderboard entry is associated with one user (many-to-one relationship with Users).

- **Rewards**

  - Stores reward details available for redemption, including reward name, description, and cost.

  - **Relationships**: None explicitly defined.

- **Stickers**

– Holds information about available stickers, including name and image path.

– **Relationships**: None explicitly defined.

- **SurveyQuestions**

  – Contains survey questions, specifying the survey they belong to and the type of question.

  – **Relationships**:

    * Each question belongs to one survey (many-to-one relationship with Surveys).

- **SurveyResponses**

  – Records responses to survey questions, including user responses.

  – **Relationships**:

    * Each response is related to one survey (many-to-one relationship with Surveys).

    * Each response answers one question (many-to-one relationship with SurveyQuestions).

    * Each response is provided by one user (many-to-one relationship with Users).

- **Surveys**

  – Manages survey details such as title and description.

  – **Relationships**:

    * A survey contains multiple questions (one-to-many relationship with SurveyQuestions).

    * A survey collects multiple responses (one-to-many relationship with SurveyResponses).

- **Tags**

  – Stores tag information used to categorize breads.

  – **Relationships**:

    * A tag can be associated with multiple breads (one-to-many relationship with Breads).

- **Users**

  - Contains user details such as username, email, role, Slack ID, and avatar.
  - **Relationships**:
    * A user can give multiple breads (one-to-many relationship with Breads).
    * A user can receive multiple breads (one-to-many relationship with Breads).
    * A user can have multiple analytics records (one-to-many relationship with Analytics).
    * A user can appear on multiple leaderboards (one-to-many relationship with Leaderboards).
    * A user can provide multiple survey responses (one-to-many relationship with SurveyResponses).

- **Workspaces**

  - Holds information about different workspaces, including name and Slack ID.
  - **Relationships**: None explicitly defined.

Summary of Key Relationships

- **One-to-Many**:

  - `Users` to `Analytics`, `Breads`, `Leaderboards`, `SurveyResponses`.
  - `Surveys` to `SurveyQuestions`, `SurveyResponses`.
  - `Tags` to `Breads`.

- **Many-to-One**:

  - `Breads` to `Users` (both sender and receiver).
  - `Breads` to `Tags`.
  - `SurveyQuestions` to `Surveys`.
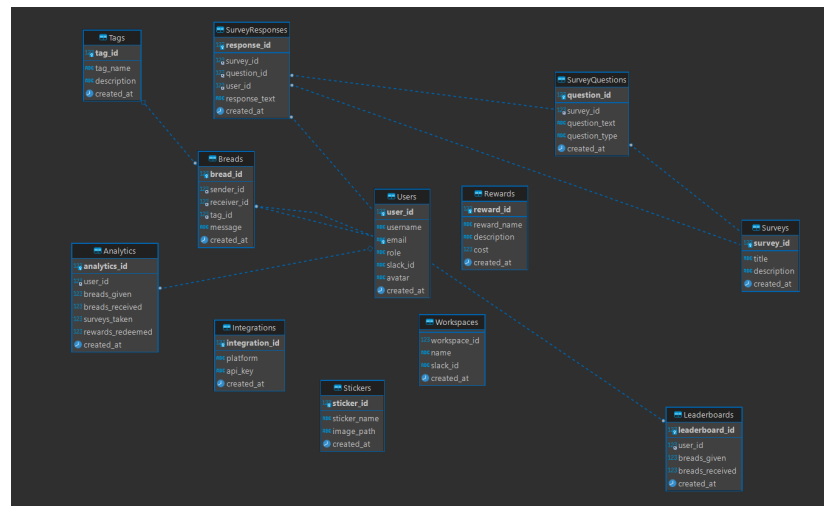 - `SurveyResponses` to `Surveys`, `SurveyQuestions`, `Users`.
  - `Leaderboards` to `Users`.

Figure 3.2: ERD Diagram

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