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A red moon in the sky

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TIC2601 Database & Web Applications

Team 4 (Topic D):

Cai Xincheng

Chong Kean Siong

Poh Yi Tat

Qian Zijing

Wang Pengcheng

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# Introduction

Rabbit is a social news platform that enable users to share information categorised by topics and interact with each other.

Below lists some of the majors features of Rabbit:

## View

All site visitors are able to view the posts and comments.

## Search

All site visitors are able to search posts with one or a combination of the below criteria:

* key words that appearing in post
* topic category

## Post and Comment

Registered users are able to post new contents and comments after logging in. They are also able to edit their posts after original post.

## Upvote / Downvote and Reputation

Registered users are able to upvote or downvote posts and comments. A net score will be computed based on the number of upvotes and downvotes received for each of the posts and comments which affects not only the visibility of the comments and contents, but also the reputation of their owners.

## Administrator

Administrators of Rabbit are able to perform create, read, update and delete operations on all data entries. They are also able to view useful statistics such as topics in trending in terms of total number of votes received, clickstream, etc.

# Technology Stack

## Architecture Overview

**Web Browser**

**Web Application**



**Database Connector**

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**Database**



## Tools and Languages

## Web Server and Application Framework

Web server: NodeJS

Application framework: Express

## Language

Client side: HTML, CSS, Javascript

Server-side: Javascript

## Database Management System

MySQL is used as the database management system for Rabbit.

# Entity Relationship

## Entities

There are 4 entities in our database schema:

* user – user profile
* post – post content
* comment – comment content of the post
* category – category list to group posts

## Relationship

* user – write – post
* user – write – comment of the post
* user – subscribe – category
* user – vote – post
* user – vote – comment of the post
* comment – of – comment
* comment – of – post
* post – have – category

## ER Diagram

(0,n)

(0,n)

(0,n)

(0,n)

(0,n)

(0,n)

(1,1)

(1,1)

(1,1)

(1,1)

(0,n)

(0,n)

username

user

password

is\_admin

created\_at

reputation

subscribe

have

of

is\_upvote

post\_id

content

header

vote

category

category

comment\_id

post

comment

write

created\_at

updated\_at

parent\_comment\_id

content

updated\_at

(0,n)

of

(1,1)

# Relational Schema

(in SQL DDL statements)

## user

Text

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## post

Graphical user interface, text, application

Description automatically generated

## comment

Graphical user interface, text, application

Description automatically generated

## category

Logo, company name

Description automatically generated

## subscribe

Text

Description automatically generated

## vote\_post

Graphical user interface, text, application

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## vote\_comment

Graphical user interface, text, application

Description automatically generated

# Sample SQL Statements

(A representative sample of SQL statements used in the system (with indication of how these

statements help to implement certain features in the system)

# Web interface and project highlights