Ratings, photos

Rating
- UserID INT
- CafeID INT
- ◇ Stars TINYINT
- ◇ Text TINYTEXT
- ◇ RatingDate TIMESTAMP
- Indexes

Photo
- 🔑 PhotoID INT
- ◆ UserID INT
- ◆ CafeID INT
- ◇ Photo BLOB
- ◇ PhotoDate TIMESTAMP
- Indexes

Cafes

Days
- 🔑 DaysAbbr CHAR(3)
- ◇ FullName VARCHAR(9)
- Indexes

Hours
- 🔑 HoursID INT
- ◆ CafeID INT
- ◆ Days ENUM('Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat', 'Sun')
- ◇ OpeningTime VARCHAR(7)
- ◇ ClosingTime VARCHAR(7)
- Indexes

Menu
- CafeID INT
- DrinkID INT
- ◇ Prices DECIMAL(5,2)
- Indexes

StandardList
- 🔑 DrinkID INT
- ◇ DrinkName VARCHAR(45)
- Indexes

Cafe
- 🔑 CafeID INT
- ◇ CafeName VARCHAR(45)
- ◇ CafeAddress VARCHAR(100)
- ◇ CafeLatitude DECIMAL(6,4)
- ◇ CafeLongitude DECIMAL(7,4)
- Indexes

FavouriteCafe
- 🔑 FavoriteCafeID INT
- ◆ UserID INT
- ◆ CafeID INT
- ◇ DateFavourite TIMESTAMP
- ◇ DateUnfavourite TIMESTAMP
- Indexes

MyBrew
- 🔑 MyBrewID INT
- ◆ UserID INT
- ◆ DrinkID INT
- ◇ DateFavourite TIMESTAMP
- ◇ DateUnforvarite TIMESTAMP
- Indexes

Timeline

LikePost
- PostID INT
- UserID INT
- ◇ Stauts ENUM('like', 'unlike')
- Indexes

Post
- 🔑 PostID INT
- ◆ UserID INT
- ◇ PostText VARCHAR(1000)
- ◇ PostPhoto BLOB
- ◇ PostDate TIMESTAMP
- Indexes

Comment
- 🔑 CommentID INT
- ◆ PostID INT
- ◆ UserID INT
- ◇ Comment VARCHAR(1000)
- ◇ CommentDate TIMESTAMP
- Indexes

User
- 🔑 UserID INT
- ◇ LoginName VARCHAR(320)
- ◇ Password CHAR(64)
- ◇ ShortScreenName VARCHAR(20)
- ◇ ProfilePhoto TINYBLOB
- Indexes

Social graph, locations, check-ins

Follow
- 🔑 FollowID INT
- ◆ UserID INT
- ◆ FollowedUserID INT
- ◇ DateFollowed TIMESTAMP
- ◇ DateUnfollowed TIMESTAMP
- Indexes

Location
- 🔑 LocationID INT
- ◆ UserID INT
- ◇ Latitude DECIMAL(6,4)
- ◇ Longitude DECIMAL(7,4)
- ◇ DateTime TIMESTAMP
- Indexes

Checkin
- 🔑 CheckinID INT
- ◆ UserID INT
- ◆ CafeID INT
- ◆ TaggedUserID INT
- ◇ CheckinDate TIMESTAMP
- Indexes

News

LikeNews
- NewsID INT
- UserID INT
- ◇ Status ENUM('like', 'unlike')
- Indexes

News
- 🔑 NewsID INT
- ◇ CafeID INT
- ◇ Heading VARCHAR(100)
- ◇ Body VARCHAR(1000)
- ◇ Photo BLOB
- ◇ NewsDate TIMESTAMP
- Indexes

Data Dictionary

List of 3 largest entities

Entities	Entity Type	Primary Key	# Attributes
Cafe	independent	CafeID	5
User	independent	UserID	5
News	independent	NewsID	6

Entity 'Cafe'

Description

This entity represents the basic information of cafe registered in the *Coffee Club* app. With 5 related items (foreign tables) of Hours, Days, Menu, Photo and Rating, the profile of a specific cafe can be viewed. It also has 2 foreign tables of FavouriteCafe and Checkin, showing how the users signed up in the app build a relation with the cafe. And that a cafe can be mentioned by app news is shown in the relationship between Cafe and News.

Attributes

Key	Attribute	Data Type	Not Null	Unique	Description
PK	CafeID	INT	YES	YES	This is the primary-key of the entity 'Cafe', generated by the DBMS, unique in the lifetime of this database.

	CafeName	VARCHAR(45)	YES	NO	Name of the cafe, with constrain of 45 characters, may be same in different cafe. However, we denote different cafe with unique CafeID. E.g. 'Market Lane Cafe' is one of the most famous cafes in Melbourne.
	CafeAddress	VARCHAR(100)	YES	NO	No more than 100 characters to hold the cafe's address. E.g. '83 Victoria Street, Melbourne, VIC, 3000' is the address of Market Lane Cafe.
	CafeLatitude	DECIMAL(6,4)	YES	NO	Record a latitude of the address with precision of 4 decimal places and 6 digits in total for the range of latitude is from -90 to 90. E.g. '-37.7988' is the latitude of one of the Market Lane Cafe recorded.
	CafeLongitude	DECIMAL(7,4)	YES	NO	Record a longitude of the address with precision of 4 decimal places and 7 digits in total for the range of longitude is from -180 to 180. E.g. '144.9501' is the longitude of one of the Market Lane Cafe recorded.

Entity 'User'

Description

This entity has a record up to 20 million personal profile of users registered in the *Coffee Club* app, which is a social platform for coffee lovers. It is the core entity of the database with 11 foreign tables, such as Post, Follow, Location, Checkin, and so on. The relationship between these tables and User shows all the app features designed for the app user. Specifically, because of the many-to-many relationship, we have constructed some associative tables like FavouriteCafe, MyBrew, LikePost and LikeNews, which can also record the preference of the user.

Attributes

Key	Attribute	Data Type	Not Null	Unique	Description
PK	UserID	INT	YES	YES	This is the primary-key of the entity 'User', generated by the DBMS, unique in the lifetime of this database.
	LoginName	VARCHAR(320)	YES	YES	The login name of the user is the email address which is unique for different user. It should be up to 320 characters for the limitation of length has a maximum of 64 characters in the local part (before the '@') and a maximum of 255 characters in the domain part (after the '@'). E.g. 'studentid@unimelb.edu.au'.
	Password	CHAR(64)	YES	NO	The password created by the user is encrypted and stored as a string of 64 characters strictly.
	ShortScreenName	VARCHAR(20)	YES	NO	The short screen name created by the user is a single string less than 20 characters which other users will see in the app. Different user may have same screen name, but we have denoted different user with unique UserID. E.g. 'Coffee Lover' is a possible screen name for the user.
	ProfilePhoto	TINYBLOB	NO	NO	Users have an option but not required to upload a photo with no more than 255 bytes as their profile photo.

Entity 'News'

Description

This entity records all the information of news which is released by *Coffee Club* app. It is a unit of all application, only relating one foreign table named LikeNews. The news stories in this entity are system-generated about significant events such as sales or

parties. Unlike the above two entities, News has a foreign-key coming from Cafe, which means that each news may contain some text with a specific cafe. Also, it is possible that a news may have no relationship to a cafe.

Attributes

Key	Attribute	Data Type	Not Null	Unique	Description
PK	NewsID	INT	YES	YES	This is the primary-key of the entity 'News', generated by the DBMS, unique in the lifetime of this database.
FK	CafeID	INT	NO	NO	A foreign-key coming from the entity named 'Cafe', and representing the cafe that is registered in *Coffee Club* app. It could be null since there can be no mentioned cafe in one news. Also, the news can be browsed by cafe.
	Heading	VARCHAR(100)	YES	NO	No more than 100 characters to hold the headline of the news. E.g. 'Sale !!!' and 'New Beans' are the news heading of this app.
	Body	VARCHAR(1000)	YES	NO	No more than 1000 characters to hold the body text of this news. It contains all the text in the news except the heading.
	Photo	BLOB	YES	NO	No more than 65535 bytes to hold the photo of the news.
	NewsDate	TIMESTAMP	YES	NO	Record the release time of the news, which may allow the stories to be browsed in date order.