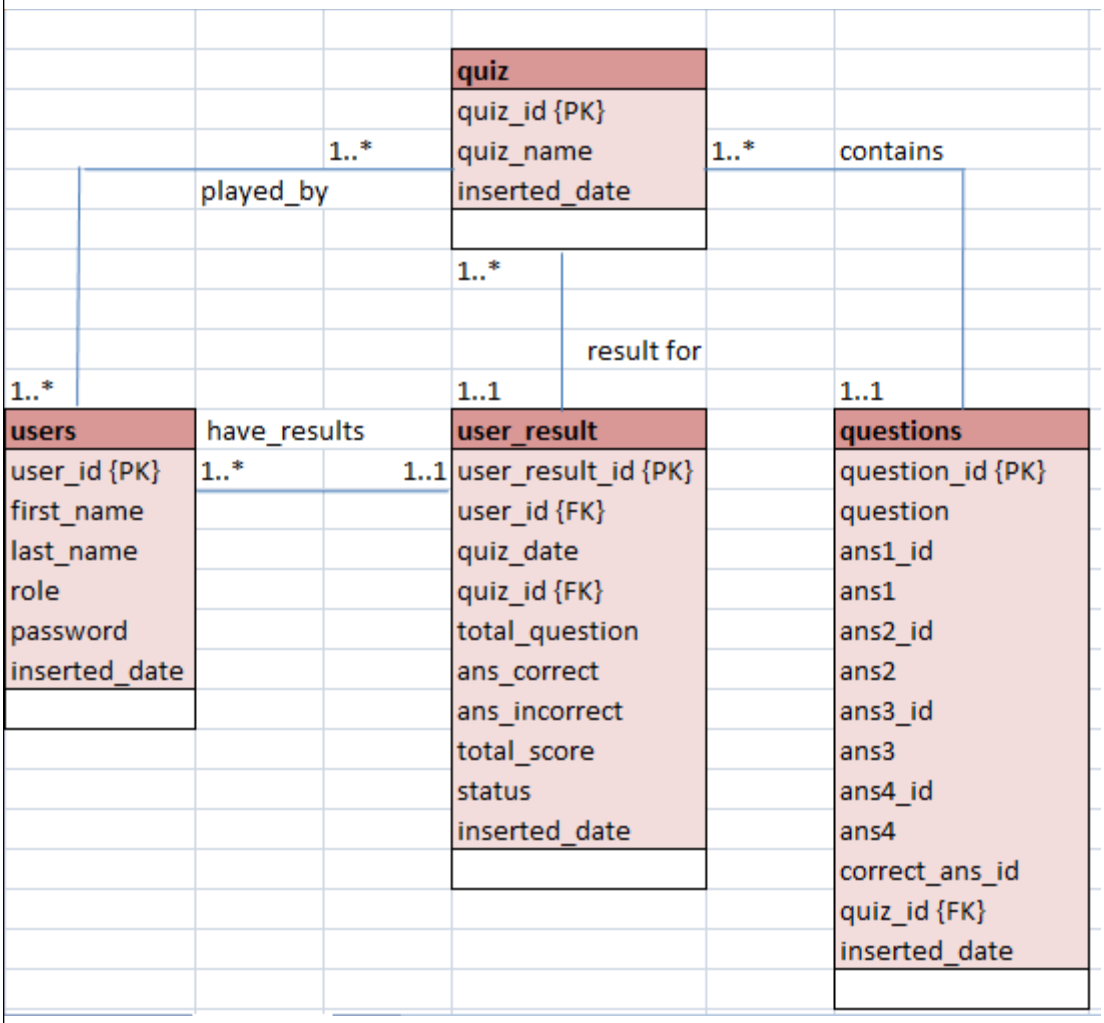
Osaka
Database Design Specification

Server: The server used for the project Osaka was dbteach2.

Database: The database created for this project is called **osakagp.** The owner of the database is dxf321 (Deedar). The other team members will be given access to the database shortly.

Entity-Relationship Diagram:



Tables:

The tables created in osakagp DB are as follows.

USERS

Table name	users			
Description	The user login details are stored in the users table. The user details are inserted into this table when a new user or administrator registers. The login credentials entered by the users are validated and the users are allowed to login only if the entered credentials exist in the users table.			
Attribute	**Description**	**Type**	**Nullability**	**Example of values**
user_id	Unique ID of an admin/student	BIG INT	NOT NULL	Between 1 and 9223372036854775807
first_name	First name of admin/student	VARCHAR (20)	NULL	Mary
last_name	Last name of admin/student	VARCHAR (20)	NULL	Ande
role	Role of user	VARCHAR (20)	NULL	admin or student
password	Password entered by admin/student to access the tool	VARCHAR (10)	NULL	
inserted_date	Timestamp of the transaction	TIMESTAMP	NOT NULL	DEFAULT is the current timestamp.
Primary Key	user_id			
Foreign Key				
SQL code	SELECT * FROM users;			

QUIZ

Table name	quiz

Description	The quiz topics are stored in this table. The quiz could be on the following topics - Politics, Sports, History, Geography, Java, Database, etc. The admin chooses the quiz topic from quiz table and fetches the topic-related questions from the questions table.			
Attribute	**Description**	**Type**	**Nullability**	**Example of values**
quiz_id	Unique ID of quiz	BIG INT	NOT NULL	Between 1 and 9223372036854775807
quiz_name	Topic of quiz	VARCHAR (40)	NULL	Politics, Sports
inserted_date	Timestamp of the transaction	TIMESTAMP	NOT NULL	DEFAULT is the current timestamp.
Primary Key	quiz_id			
Foreign Key				
SQL code	SELECT * FROM quiz;			

QUESTIONS

Table name	questions			
Description	The questions table contains the questions which are answered in quiz. Question and possible answers are stored as rows in the questions table. The table also contains a separate column for quiz ID. The admin uses the quiz ID to get the questions for the chosen quiz topic.			
Attribute	**Description**	**Type**	**Nullability**	**Example of values**
question_id	Unique ID of question	BIG INT	NOT NULL	Between 1 and 9223372036854775807
question	The question to be answered by students	VARCHAR (100)	NULL	In which country is the Albert canal?
ans1_id	ID of first possible answer	INT	NOT NULL	DEFAULT is 1
ans1	First possible answer	VARCHAR (40)	NULL	Spain
ans2_id	ID of second possible answer	INT	NOT NULL	DEFAULT is 2
ans2	Second possible answer	VARCHAR (40)	NULL	Belgium
ans3_id	ID of third	INT	NOT NULL	DEFAULT is 3

	possible answer			
ans3	Third possible answer	VARCHAR (40)	NULL	Canada
ans4_id	ID of fourth possible answer	INT	NOT NULL	DEFAULT is 4
ans4	Fourth possible answer	VARCHAR (40)	NULL	Portugal
correct_ans_id	The ID of correct answer	INT	NOT NULL	2
quiz_id	The ID of quiz	BIG INT	NOT NULL	4
inserted_date	Timestamp of the transaction	TIMESTAMP	NOT NULL	DEFAULT is the current timestamp.
Primary Key	question_id			
Foreign Key	quiz_id			
SQL code	SELECT * FROM questions;			

USER_RESULT

Table name	user_result			
Description	This table contains the quiz results for all the students. It is loaded with quiz result once the quiz is completed. The user can see the result by quiz date, quiz topic, score and quiz status.			
Attribute	**Description**	**Type**	**Nullability**	**Example of values**
user_result_id	Unique ID for the row	BIG INT	NOT NULL	Between 1 and 9223372036854775807
user_id	ID of user	BIG INT	NOT NULL	Between 1 and 9223372036854775807
quiz_date	Date on which quiz is played	TIMESTAMP	NOT NULL	DEFAULT is Current Timestamp
quiz_id	ID of quiz played by the student	BIG INT	NOT NULL	Between 1 and 9223372036854775807
total_question	Number of questions displayed in a quiz	INT	NULL	10

ans_correct	Number of questions answered correctly before any other student	INT	NULL	Between 0 and 10
ans_incorrect	Number of questions answered incorrectly	INT	NULL	Between 0 and 10
total_score	Number of questions answered correctly before any other student	INT	NULL	Between 0 and 10
status	If a student won or lost the quiz	VARCHAR(10)	NULL	WON or LOST
inserted_date	Timestamp of the transaction	TIMESTAMP	NOT NULL	DEFAULT is the current timestamp.
Primary Key	user_result_id			
Foreign Key	user_id, quiz_id			
SQL code	SELECT * FROM user_result;			

SQL statements for database and tables creation:

```
CREATE DATABASE osakadb OWNER dxf321;

CREATE TABLE users
(
user_id  BIGSERIAL PRIMARY KEY,
first_name VARCHAR (20),
last_name VARCHAR (20),
role VARCHAR (20),
password VARCHAR (10),
inserted_date timestamp default current_timestamp
);


CREATE TABLE quiz
 (
quiz_id  BIGSERIAL PRIMARY KEY,
quiz_name VARCHAR (40),
 inserted_date timestamp default current_timestamp
);
```

```
CREATE TABLE questions
 (
question_id  BIGSERIAL PRIMARY KEY,
question VARCHAR (100),
ans1_id INT default 1,
ans1 VARCHAR (40),
ans2_id INT default 2,
ans2 VARCHAR (40),
ans3_id INT default 3,
ans3 VARCHAR (40),
ans4_id INT default 4,
 ans4 VARCHAR (40),
correct_ans_id INT NOT NULL,
quiz_id BIGINT REFERENCES quiz (quiz_id),
inserted_date timestamp default current_timestamp
);


CREATE TABLE user_result (
user_result_id  BIGSERIAL PRIMARY KEY,
 user_id  BIGINT  REFERENCES users (user_id),
quiz_date timestamp default current_timestamp,
quiz_id BIGINT  REFERENCES quiz(quiz_id),
total_question INT,
ans_correct INT,
ans_incorrect INT,
total_score INT,
status VARCHAR (10),
 inserted_date timestamp default current_timestamp
);
```

Tables Load:

```
INSERT INTO users (first_name, last_name, role) VALUES ('Mary', 'Ande', 'student');
 INSERT INTO users (first_name, last_name, role) VALUES ('Andrew', 'Baker',
'student');
 INSERT INTO users (first_name, last_name, role) VALUES ('Katie', 'Bowyer',
'student');
 INSERT INTO users (first_name, last_name, role) VALUES ('Katherine', 'Brittain',
'student');
 INSERT INTO users (first_name, last_name, role) VALUES ('Thomas', 'Chapman',
'student');
 INSERT INTO users (first_name, last_name, role) VALUES ('Andrew', 'Green',
'student');
INSERT INTO users (first_name, last_name, role) VALUES ('Matthew', 'Harris',
'student');
INSERT INTO users (first_name, last_name, role) VALUES ('Ella', 'Hibbert', 'student');
```

```
INSERT INTO users (first_name, last_name, role) VALUES ('Daniel', 'Hirst', 'student');
INSERT INTO users (first_name, last_name, role) VALUES ('Antony', 'Judd', 'student');
INSERT INTO users (first_name, last_name, role) VALUES ('George', 'Kiff', 'admin');
INSERT INTO users (first_name, last_name, role) VALUES ('Joseph', 'May', 'admin');

INSERT INTO quiz (quiz_name) VALUES ('History');
INSERT INTO quiz (quiz_name) VALUES ('Politics');
INSERT INTO quiz (quiz_name) VALUES ('Sports');
INSERT INTO quiz (quiz_name) VALUES ('Java');
INSERT INTO quiz (quiz_name) VALUES ('Database');
INSERT INTO quiz (quiz_name) VALUES ('Geography');


INSERT INTO questions (question, ans1, ans2, ans3, ans4, correct_ans_id, quiz_id)
VALUES ('In which country is the Albert canal?', 'Spain', ‘Belgium’, ‘Canada’,
‘Portugal’, 2, 4);

INSERT INTO questions (question, ans1, ans2, ans3, ans4, correct_ans_id, quiz_id)
VALUES ('Which is the only US state named after an English county?',  'Kentucky',
'North Dakota',  'Vermont',  'New Hampshire', 4, 6);

INSERT INTO questions (question, ans1, ans2, ans3, ans4, correct_ans_id, quiz_id)
VALUES ('Which British cyclist won the 100th edition of the Tour de France?',  'Chris
Froome',  'Lizzie Armitstead',  'Matt Crampton',  'Kyle Evans', 1, 3);

INSERT INTO questions (question, ans1, ans2, ans3, ans4, correct_ans_id, quiz_id)
VALUES ('How many players are there in a basketball team?', '11', '14', '5', 6, 3, 3);



INSERT INTO user_result (user_id,quiz_id,total_question, ans_correct, ans_incorrect,
total_score, status) VALUES ( 1, 2, 10, 8,  2, 8, 'WON');
INSERT INTO user_result (user_id,quiz_id,total_question, ans_correct, ans_incorrect,
total_score, status) VALUES ( 1, 4, 10, 10,  0, 10, 'WON');
INSERT INTO user_result (user_id,quiz_id,total_question, ans_correct, ans_incorrect,
total_score, status) VALUES ( 6, 2, 10, 10,  0, 10, 'WON');
INSERT INTO user_result (user_id,quiz_id,total_question, ans_correct, ans_incorrect,
total_score, status) VALUES ( 6, 6, 10, 9,  1, 9, 'WON');
INSERT INTO user_result (user_id,quiz_id,total_question, ans_correct, ans_incorrect,
total_score, status) VALUES ( 7, 3, 10, 5,  5, 5, 'LOST');
```