



GRE TSA UNIVERSITY - THIKA

UNIVERSITY EXAMINATIONS JANUARY - APRIL 2023 SEMESTER

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

COURSE CODE: BSCS 306

COURSE TITLE: IT PRACTICAL II

DATE: 20 MARCH 2023

TIME: 2.00PM-3.00PM

INSTRUCTIONS TO CANDIDATES

- a) ANSWER ALL QUESTIONS.**
- b) DO NOT WRITE ANYTHING ON THIS QUESTION PAPER AS IT WILL BE AN EXAM IRREGULARITY.**

CAUTION: *All exam rooms are under CCTV surveillance during the examination period.*

SECTION A: COMPULSORY

Run the following SQL queries before answering the questions below

```
CREATE DATABASE record_company;
```

```
USE record_company;
```

```
CREATE TABLE bands (  
  
    id INT NOT NULL AUTO_INCREMENT,  
  
    name VARCHAR(255) NOT NULL,  
  
    PRIMARY KEY (id)  
  
);
```

```
CREATE TABLE albums (  
  
    id INT NOT NULL AUTO_INCREMENT,  
  
    name VARCHAR(255) NOT NULL,  
  
    release_year INT,  
  
    band_id INT NOT NULL,  
  
    PRIMARY KEY (id),  
  
    FOREIGN KEY (band_id) REFERENCES bands(id)  
  
);
```

Question One

1. Create a Songs Table

This table should be called songs and have four properties with these exact names.

id: An integer that is the primary key, and auto increments.

name: A string that cannot be null.

length: A float that represents the length of the song in minutes that cannot be null.

album_id: An integer that is a foreign key referencing the albums table that cannot be null.

After successfully creating the table copy the code below run it to populate all of the data for the rest of the exercises. If you do not encounter any errors, then your answer is most likely correct.

```
INSERT INTO bands(id,name) VALUES (1,'Seventh Wonder');
```

```
INSERT INTO albums(id,name,release_year,band_id) VALUES (1,'Tiara',2018,1);
```

```
INSERT INTO songs(id,name,length,album_id) VALUES (1,'Arrival',1+(30/60),1);
```

2. Select only the Names of all the Bands

Change the name of the column the data returns to Band Name

3. Select the Oldest Album

Make sure to only return one result from this query, and that you are not returning any albums that do not have a release year.

4. Update the Release Year of the Album with no Release Year

Set the release year to 1986.

You may run into an error if you try to update the release year by using release_year IS NULL in the WHERE statement of your UPDATE. This is because MySQL by default will not let

you update a table that has a primary key without using the primary key in the UPDATE statement. This is a good thing since you almost never want to update rows without using the primary key, so to get around this error make sure to use the primary key of the row you want to update in the WHERE of the UPDATE statement.

5. Insert a record for your favorite Band and one of their Albums

6. Delete the Band and Album you added in #5

7. Get the Average Length of all Songs

END OF EXAMINATION