

Dinesh Kumar Selvam

DATABASE COURSEWORK - 2

COMP 23111

7th December 2021

PART A: Normalisation

UNF:

Quiz ID	Quiz Name	Quiz Author	Quiz Available	Quiz Duration
34	SQL	Peter Parker	Yes	60 minutes

Student ID	Student Name	Date of Attempt
44	Duncan Hull	22/11/2020

Quiz ID	Questions
34	1. Which SQL Statement is used to extract data from a database? SELECT OPEN EXTRACT GET
34	2. Which SQL Statement is used to insert new data in a database? INSERT NEW INSERT INTO ADD RECORD ADD NEW
34	3. With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"? SELECT* FROM Persons WHERE FIRSTNAME <> 'Peter' SELECT [all] FROM Person WHERE FirstName = 'Peter' SELECT* FROM Persons WHERE FirstName = 'Peter' SELECT [all] FROM Person WHERE FirstName LIKE 'Peter'

1NF:

Quiz ID	Quiz Name	Quiz Author	Quiz Available	Quiz Duration	Student ID	Student Name	Date of Attempt
34	SQL	Peter Parker	Yes	60 minutes	44	Duncan Hull	22/11/2020

Quiz ID	Question Number	Questions	Option Number	Options
34	1	Which SQL Statement is used to extract data from a database?	1	SELECT
34	1	Which SQL Statement is used to extract data from a database?	2	OPEN
34	1	Which SQL Statement is used to extract data from a database?	3	EXTRACT
34	1	Which SQL Statement is used to extract data from a database?	4	GET
34	2	Which SQL Statement is used to insert new data in a database?	1	INSERT NEW
34	2	Which SQL Statement is used to insert new data in a database?	2	INSERT INTO
34	2	Which SQL Statement is used to insert new data in a database?	3	ADD RECORD
34	2	Which SQL Statement is used to insert new data in a database?	4	ADD NEW
34	3	With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"?	1	SELECT* FROM Persons WHERE FIRSTNAME <> 'Peter'
34	3	With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"?	2	SELECT [all] FROM Person WHERE FirstName = 'Peter'
34	3	With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"?	3	SELECT* FROM Persons WHERE FirstName = 'Peter'
34	3	With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"?	4	SELECT [all] FROM Person WHERE FirstName LIKE 'Peter'

2NF:

Q uiz ID	Qui z Na me	Qu iz Au tho r	Qui z Av aila ble	Qui z Du rati on
34	SQL	Pet er Par ker	Yes	60 mi nut es

Stud ent ID	Stud ent Nam e	Date of Atte mpt
44	Dun can Hull	22/1 1/20 20

Q uiz ID	Qu esti on Nu mb er	Questions	Option 1	Option 2	Option 3	Option 4
34	1	Which SQL Statement is used to extract data from a database?	SELECT	OPEN	EXTRACT	GET
34	2	Which SQL Statement is used to insert new data in a database?	INSERT NEW	INSERT INTO	ADD RECORD	ADD NEW
34	3	With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"?	SELECT* FROM Persons WHERE FIRSTNAME <> 'Peter'	SELECT [all] FROM Person WHERE FirstName = 'Peter'	SELECT* FROM Persons WHERE FirstName = 'Peter'	SELECT [all] FROM Person WHERE FirstName LIKE 'Peter'

3NF:

Q uiz ID	Qui z Na me	Qu iz Au tho r	Qui z Av aila ble	Qui z Du rati on
34	SQL	Pet er Par ker	Yes	60 mi nut es

Stud ent ID	Stud ent Nam e	Date of Atte mpt
44	Dun can Hull	22/1 1/20 20

Q uiz ID	Qu esti on Nu mb er	Questions	Option 1	Option 2	Option 3	Option 4
34	1	Which SQL Statement is used to extract data from a database?	SELECT	OPEN	EXTRACT	GET
34	2	Which SQL Statement is used to insert new data in a database?	INSERT NEW	INSERT INTO	ADD RECORD	ADD NEW
34	3	With SQL, how do you select all the records from a table named "Persons" where the value of the column "FirstName" is "Peter"?	SELECT* FROM Persons WHERE FIRSTNAME <> 'Peter'	SELECT [all] FROM Person WHERE FirstName = 'Peter'	SELECT* FROM Persons WHERE FirstName = 'Peter'	SELECT [all] FROM Person WHERE FirstName LIKE 'Peter'

PART B: Relational Schema

quiz quiz	quiz user	quiz quiz1	quiz quiz details
<ul style="list-style-type: none"> Quiz ID : int(5) Question Number : int(5) Questions : text Option 1 : text Option 2 : text Option 3 : text Option 4 : text 	<ul style="list-style-type: none"> Username : varchar(150) Name : varchar(150) Email : varchar(200) password : varchar(150) Type : varchar(100) 	<ul style="list-style-type: none"> question_number : int(10) question : text option1 : text option2 : text option3 : text option4 : text answer : int(10) 	<ul style="list-style-type: none"> Quiz ID : int(5) Quiz Name : varchar(100) Quiz Author : varchar(150) Quiz Available : varchar(5) Quiz Duration : varchar(5)
	<ul style="list-style-type: none"> quiz score Username : varchar(150) Type : varchar(100) Quiz ID : int(5) Score : int(10) percentage : int(10) 		

PART C: Implementation

```
CREATE TABLE IF NOT EXISTS `quiz`.`quiz details` ( `Quiz ID` INT(5) NOT NULL ,
`Quiz Name` VARCHAR(100) NOT NULL , `Quiz Author` VARCHAR(150) NOT NULL , `Quiz
Available` VARCHAR(5) NOT NULL , `Quiz Duration` VARCHAR(5) NOT NULL , PRIMARY
KEY (`Quiz ID`)) ENGINE = InnoDB;
```

```
CREATE TABLE IF NOT EXISTS `quiz`.`quiz` ( `Quiz ID` INT(5) NOT NULL , `Question
Number` INT(5) NOT NULL , `Questions` TEXT NOT NULL , `Option 1` TEXT NOT NULL ,
`Option 2` TEXT NOT NULL , `Option 3` TEXT NOT NULL , `Option 4` TEXT NOT NULL ,
PRIMARY KEY (`Quiz ID`)) ENGINE = InnoDB;
```

```
CREATE TABLE IF NOT EXISTS `quiz`.`score` ( `Username` VARCHAR(150) NOT NULL ,
`Type` VARCHAR(100) NOT NULL , `Quiz ID` INT(5) NOT NULL , `Score` INT(10) NOT
NULL,`percentage` INT(10) NOT NULL , PRIMARY KEY (`Username`)) ENGINE = InnoDB;
```

```
CREATE TABLE IF NOT EXISTS `quiz`.`user` ( `Username` VARCHAR(150) NOT NULL ,
`Name` VARCHAR(150) NOT NULL , `Email` VARCHAR(200) NOT NULL , `password`
VARCHAR(150) NOT NULL , `Type` VARCHAR(100) NOT NULL , PRIMARY KEY (`Username`),
UNIQUE (`Email`)) ENGINE = InnoDB;
```

PART D: Application

1. First Register as a staff.
2. Second Login using the staff credentials.
3. Third create a quiz.
4. Fourth Register as a student.
5. Fifth Login using student credentials.
6. Next attempt the quiz as the student and view scores.
7. Next Login as staff and try other options to modify the quiz.

NOTE: THIS APPLICATION WAS TESTED USING XAMMP APACHE SERVER AND XAMMP MYSQL SERVER USING PHPMYADMIN ON WINDOWS OS. THERE MIGHT BE SOME CHANGES/ERRORS WHEN EXECUTING IN A DIFFERENT ENVIRONMENT.