NOTE: All questions in this quiz relate to the following table of data.

Department ID	Department Name	Head of department	Course ID	Course Name
D1	Computing	Dr Karl	C1	Database
D1	Computing	Dr Karl	C2	Python
D1	Computing	Dr Karl	C3	Web
D1	Computing	Dr Karl	C4	Java
D2	Database	Dr Mosa	C1	Introduction to DB
D2	Database	Dr Mosa	C2	DB Analytics

1.The table of data conforms with the first normal form.

1 / 1 point

○ True

◉ False

✓Correct
Correct! This table contains unnecessary repeating groups of data as shown in the department ID, name and head of department columns.

2.What steps can you take to make sure that the table complies with the first normal form? Select all that apply.

1 / 1 point

☑ Decompose the table to avoid data redundancy.

✓Correct
Correct! Decomposing the table removes any unnecessary duplication of data.

☐ Assign a foreign key to the table.

☑ Assign a primary key to the table.

✓Correct
Correct! A primary key is required to ensure that the table contains unique records of data.

3.Assume that the table has been decomposed into two separate tables: "Departments" and "Courses". Which attributes should be included in each of the new tables? Remember that the records of the two tables must be linked with a foreign key.

1 / 1 point

◉ The "Departments" table should include the department ID, name, and head of department. The "Courses" table should include the course ID, course name and department ID.

○ The "Departments" table should include the department ID, name, and head of department. The "Courses" table should include the course ID and course name.

✓Correct
Correct! The "Courses" table should include the department ID as a foreign key to link the two tables.

4.After the normalization process is completed and the "College" table is decomposed into two tables called "Departments" and "Courses". Which of the following two diagrams represents the correct schema?
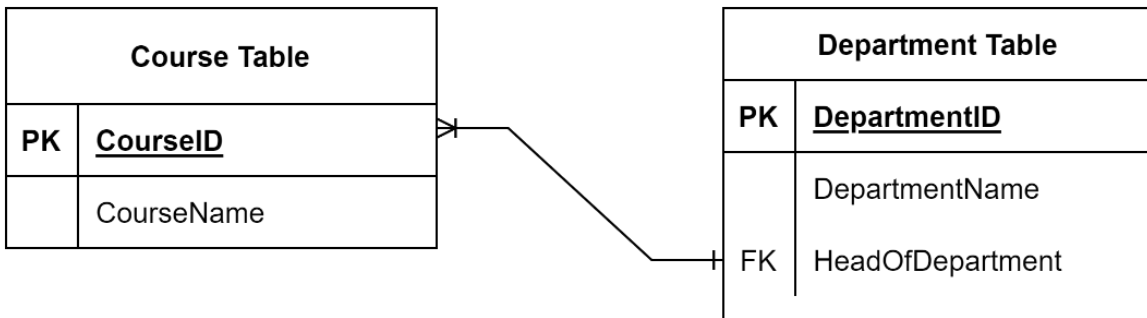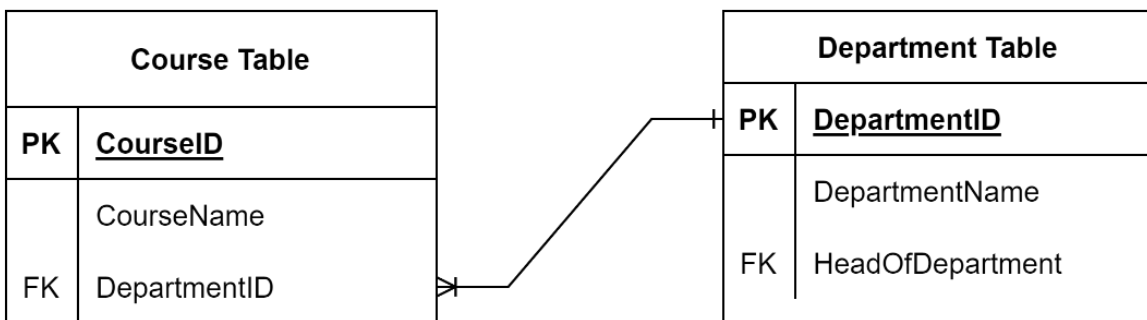
1 / 1 point

Diagram 1

Course Table	
PK	**CourseID**
	CourseName

Department Table	
PK	**DepartmentID**
	DepartmentName
FK	HeadOfDepartment

Diagram 2

Course Table	
PK	**CourseID**
	CourseName
FK	DepartmentID

Department Table	
PK	**DepartmentID**
	DepartmentName
FK	HeadOfDepartment

○ Diagram 1

◉ Diagram 2

⊘Correct
  Correct! The Courses table is the child table. It includes the department ID as a foreign key, which connects
  the two tables.

5. Which of the following SQL statements can be used to create the Courses table in the new schema? Remember that
   the Courses table must be linked to the Departments table.

○
```
1    CREATE TABLE Courses
2    (
3        CourseID VARCHAR(5),
4        CourseName VARCHAR(50),
5        DepartmentID VARCHAR(10),
6        PRIMARY KEY (CourseID),
7        FOREIGN KEY (DepartmentID)
8        REFERENCES Courses (DepartmentID)
9    );
```

```sql
1   CREATE TABLE Courses
2   (
3       CourseID VARCHAR(5),
4       CourseName VARCHAR(50),
5       DepartmentID VARCHAR(10),
6       PRIMARY KEY (CourseID),
7       FOREIGN KEY (DepartmentID)
8       REFERENCES Departments (DepartmentID)
9   );
```

✓ Correct
Correct! This is the right SQL syntax.