# C1- S4-PRACTICE

# Exercice 1

Q1 – Complete the **attributes type**s of Book and Read entities (5 points)

Q2 – Complete the **relation** between the Book and Reader entities (5 points)

|  |  |
| --- | --- |
| **Reader** | |
| ReaderID  Name  Class  Address | Numeric  String  String  String |

|  |  |
| --- | --- |
| **Book** | |
| BookID  Title  Publishment date  Language | Numeric  **String**  **Timeline**  **string** |

|  |  |  |
| --- | --- | --- |
| **Book borrow** | | |
| BookID  ReaderID | Numeric  One  Numeric |

many

Many

|  |  |
| --- | --- |
| **Reader** | |
| ReaderID  Name  Address  …………. | Numeric  String  String |

|  |  |
| --- | --- |
| **Book** | |
| BookID  Title  Language  ……………… | Numeric  String  String |

Q3 – We have created an **additional Associative table** to manage the previous relation between Book and Reader

* Complete the missing parts!

.

many

[Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

many

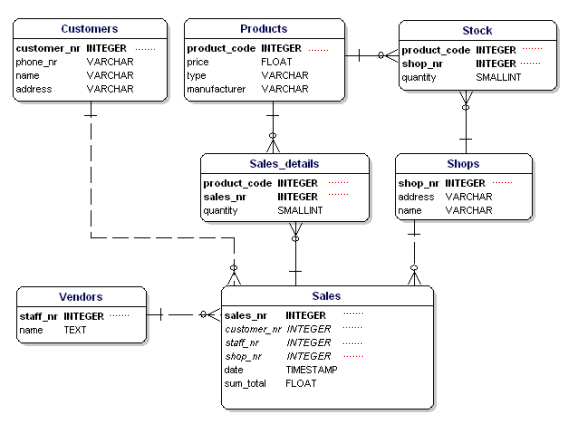
|  |  |
| --- | --- |
| **BookBorrow** | |
| BorrowID  Date borrow  Date return  ReaderID  BookID | Numeric  Timeline  Timeline  Numeric  Numeric |

many

many

# Exercice 2

Q1: complete the missing part of a model diagram below with PK as primary or FK foreign key.

****

PK

FK

FK

PK

PK

PK

??

??

??

??

??

PK

FK

??

??

PK

FK

??

??

PK

PK

PK

??

??

??

FK

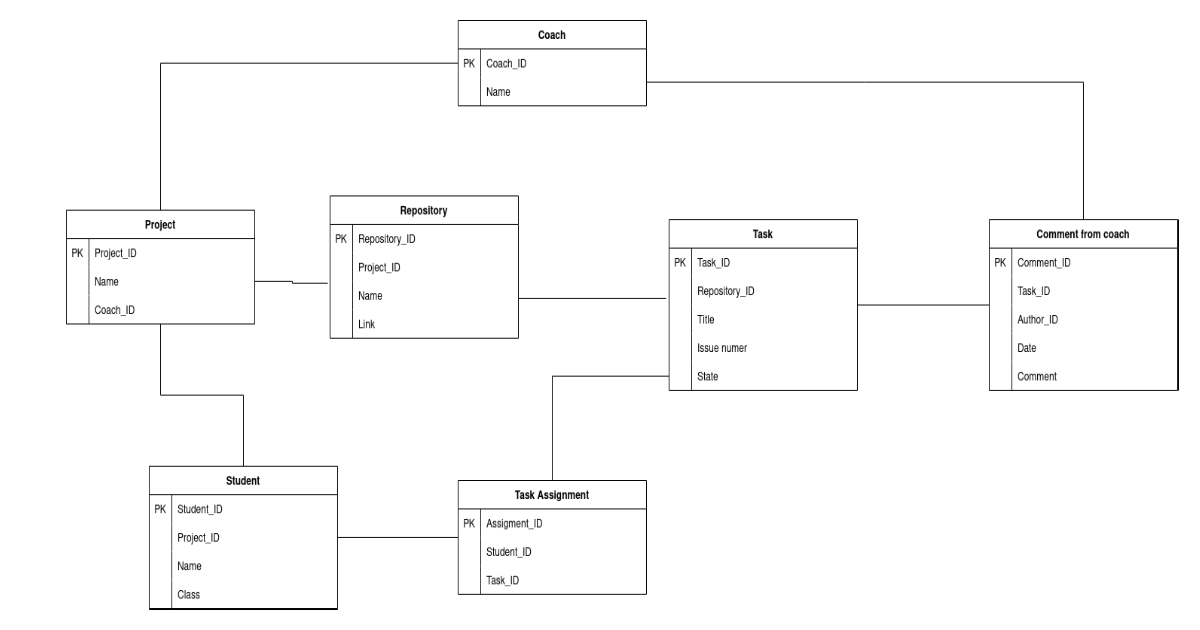
FK

??

??

# Exercise 3

Q1: Complete the relation between each entity on the database relation model. Take for example the relation between **STUDENTS** and **PROJECTS.**

****

Many

Many

Many

Many

M

M

M

M

M

M

M

M

M

M

M

M

# Exercise 4

Google Classroom is the tool used to manage PNC classes, where the teacher can assign homework to the students of different classes.

**Q1**: Complete the attributes types in the following tables

|  |  |
| --- | --- |
| **User** | |
| user ID  email  password  name  role | **Numeric**  **string**  **string**  **string**  **string** |

|  |  |
| --- | --- |
| **Classroom** | |
| classroom ID  name  section  subject | **numeric**  **string**  **string**  **stirng** |

|  |  |
| --- | --- |
| **Assignment** | |
| assignment ID  title  description  deadline | **numeric**  **string**  **string**  **timeline** |

|  |  |
| --- | --- |
| **Comment** | |
| comment ID  content  user ID  assignment ID | **numeric**  **string**  **numeric**  **numeric** |

Here are some observations that can help us design the Google Classroom database:

* A user can create many classrooms as teacher
* A user can join many classrooms as student
* A classroom can have many teachers
* A classroom can have many students
* A teacher can post many assignments in a classroom, and the same assignment can be posted in several classrooms
* An assignment post can have many comments from students or teachers

**Q2**   **CLASSROOM** and **ASSIGNEMENT**

1. Type of relation: *one to one, one to many, many to many*?

Many to many.

1. Do you need to create an intersection table? Why?

No, I don’t because I don’t need add more.

1. Create the ERD representing to represent those 2 entities and their relation

|  |  |
| --- | --- |
| CLASSROOM | |
| ClassroomID | numeric |
| Name classroom | string |

|  |  |
| --- | --- |
| ASSIGNEMENT | |
| AssignementID | Numeric |
| Name assignment | string |
| Date | Timeline |

**Q3:**   **CLASSROOM** and **ASSIGNEMENT**

1. Type of relation: *one to one, one to many, many to many?*
2. Do you need to create an intersection table or not? Why?
3. Update the previous ERD to represent those 2 entities and their relation

**Q4:**   **COMMENT** and **ASSIGNEMENT**

1. Type of relation: *one to one, one to many, many to many*

*Many to many*

1. Do you need to create an intersection table or not? Why?

No, I don’t because I don’t need to create more attribute.

1. Update the previous ERD to represent those 2 entities and their relation

|  |  |
| --- | --- |
| Assignment | |
| Assignment Id | Numeric |
| Assignment name | string |
| date | timeline |

|  |  |
| --- | --- |
| Comment | |
| Comment ID | Numeric |
| date | timeline |
| Name comment | string |

**Q5:**   **COMMENT** and **USER**

1. Type of relation: *one to one, one to many, many to many?*

*Many to many*

1. Do you need to create an intersection table or not? Why?

Yes, I do because I need to create date of user comment.

1. Update the previous ERD to represent those 2 entities and their relation

|  |  |
| --- | --- |
| user | |
| user ID | Numeric |
| User Name | string |

|  |  |
| --- | --- |
| Comments | |
| Comment ID | Numeric |
| date | timeline |
| Name comment | string |

|  |  |
| --- | --- |
| User comment | |
| user ID | Numeric |
| Comment ID | string |
| Date | Timeline |