# 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  Datetime  String |

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!

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# **1`**

1

1

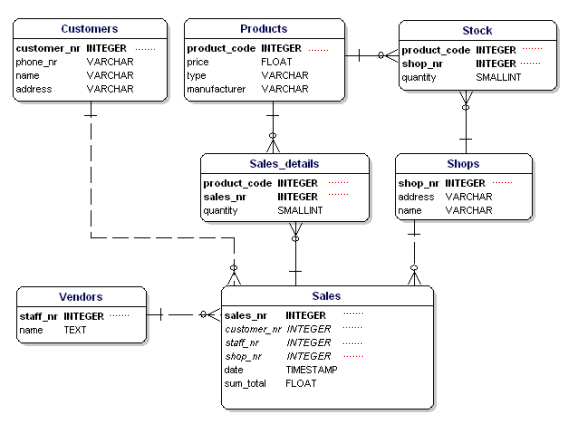
|  |  |
| --- | --- |
| **BookBorrow** | |
| BorrowID  Date borrow  Date return  ReaderID  BookID | PK  Fk  Fk |

many

many

# Exercice 2

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

****

PK

PK

PK

FK

FK

PK

FK

PK

FK

FK

PK

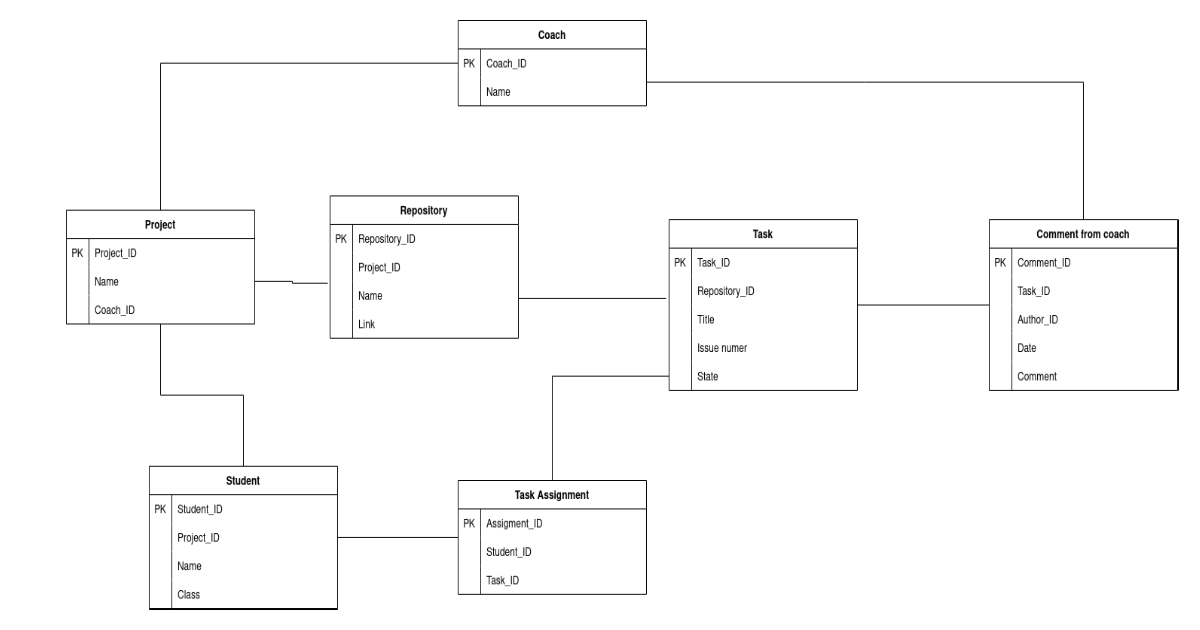
PK

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

many

many

many

many

1

1

1

1

1

1

1

1

# 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**  **String** |

|  |  |
| --- | --- |
| **Assignment** | |
| assignment ID  title  description  deadline | **Numeric**  **String**  **String**  **String** |

|  |  |
| --- | --- |
| **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 1 to many
* A user can join many classrooms as student 1 to many
* A classroom can have many teachers 1 to many
* A classroom can have many students 1 to many
* A teacher can post many assignments in a classroom, and the same assignment can be posted in several classrooms many to many
* An assignment post can have many comments from students or teachers many to many

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

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

* Type of relation is many to many.

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

* Yes, I need to create an intersection table.

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

|  |  |
| --- | --- |
| Classroom | |
| classroom ID  name  section  subject | **Numeric**  **String**  **String**  **String** |

|  |  |
| --- | --- |
| Assignment | |
| assignment ID  title  description  deadline | **Numeric**  **String**  **String**  **String** |

|  |  |
| --- | --- |
| Classroom\_Assinment | |
| Classroom ID  assignment ID | **Numeric**  **Numeric** |

1 many many 1

**Q3:**   **COMMENT** and **ASSIGNEMENT**

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

* Type of relation in 1 to many.

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

* No, I want to create an associative.

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

|  |  |
| --- | --- |
| Assignment | |
| assignment ID  title  description  deadline | **Numeric**  **String**  **String**  **String** |

|  |  |
| --- | --- |
| COMMENT | |
| comment ID  content  user ID  assignment ID | **Numeric**  **String**  **Numeric**  **numeric** |

1 many

**Q4:**   **COMMENT** and **USER**

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

* Type of relation is many to many.

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

* No, I don’t need but I want to create associative table.

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

|  |  |
| --- | --- |
| COMMENT | |
| comment ID  content  user ID  assignment ID | **Numeric**  **String**  **Numeric**  **Numeric** |

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

|  |  |
| --- | --- |
| **Comment-User** | |
| user ID  comment ID  commnt date | **Numeric**  **Numeric**  **detatime** |

1 many many 1