**David Bolatimi**

**Assigment\_3; Individual Assignment.**

**Due date: Feb/02nd at 11:59 pm**

**NO LATE SUBMISSION IS ACCEPTED.**

**Chapter 6:**

1. **Given the dependency diagram shown in Figure Q6.6, answer items 6a-6c:**



* 1. Identify and discuss each of the indicated dependencies. (15 POINTS)
  2. Create a database whose tables are at least in 2NF, showing the dependency diagrams for each table. (5 POINTS)
  3. Create a database whose tables are at least in 3NF, showing the dependency diagrams for each table. (5 POINTS)

ANSWERS:

a.

Functional Dependencies:

C1 --> (C2, C4, C5)

C3 --> (C2, C4, C5)

Partial Dependencies:

C1 ---> C2

Transitive Dependencies:

C4 ---> C5

b. Table 1 (3NF)

PK: C1



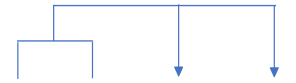
|  |  |
| --- | --- |
| C1 | C2 |

Table 2 (2NF because of transitive dependencies C4 ---> C5)

PK: C1

PK: C2

FK: C1



|  |  |  |  |
| --- | --- | --- | --- |
| C1 | C3 | C4 | C5 |



c. Table 1 (3NF)

PK: C1



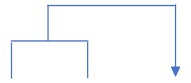
|  |  |
| --- | --- |
| C1 | C2 |

Table 2 (3NF)

PK: C1

PK: C3

FK: C4



|  |  |  |
| --- | --- | --- |
| C1 | C3 | C4 |

Table 3 (3NF)

PK: C4



|  |  |
| --- | --- |
| C4 | C5 |

**Chapter 7:**

* **Part A--**Use the SQL script to create the construction database in your SQL Server database account. Create the relationships as shown on page 323 or Figure P7.1 at the end of Chapter 7. Screen capture the resulting ERD and name it A3.PartA.jpg. (30 POINTS)

**Here is Figure P7.1**

Diagram

Description automatically generated

* **Part B--**Write a query for Problems 1 through 8 (Inclusively) at the end of Chapter 7 for the construction database script. Save the queries in the file A3.PartB.sql. (Each has 5 point; Total 40 POINTS)
* **Part C**--Write a query for Problems 31 through 45 (inclusively) at the end of Chapter 7 for the Large Company database. Save the queries in the file A3.PartC.sql. (each has 7 point; Total105 POINTS)

**Here is Large Company ERD:**

Diagram, schematic

Description automatically generated