

# T.R. GEBZE TECHNICAL UNIVERSITY FACULTY OF ENGINEERING DEPARTMENT OF COMPUTER ENGINEERING

### **PAYMENT PLAN COMPANY**

**DATABASE and INTERFACE** 

# **CSE 414 DATABASES TERM PROJECT REPORT**

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**ASSISTANT** 

**KOCAELİ, 2021** 

#### **Project Details:**

- Suppose that you have a company.
  - You want to create the database of your company with user interfaces of it.
- Describe the user requirements of your company.
- Draw the E-R diyagram of the company.
- Do normalization.
- List the functional dependencies.
- List your tables.
- Create the database including everything (tables, relationships, keys etc.).
  - You may use any database management system.
- Create the user interface of at least 5 modules using any programming language.
  - Choose the interfaces according to the questions below.
  - Create 1 outer right, 1 outer left, full outer querry on user interface.
- Create and use at least 5 different triggers making completely different tasks. Show how they are working in your interfaces.
- Create and use at least 5 different views that are completely different from each other. Show how they are working in your interface.

#### **Additional:**

- Give and create at least 3 atomic transactions.
- For at least 3 tasks solve concurrency of transactions using any techniques in the book.
- Add additional details about the database if there is any.
- Use inheritance for the tables.

#### Note:

- Your E-R diagram should be as complex as the E-R diagram of student managements system example in the book. Which means, it should be have many entities and relations.
- You have to prepare your project individually. This project is not a group Project.

#### **Deadline:**

• 06 Jun 2021 23:55

#### **Submission:**

On Moodle

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#### 1. COMPANY DEFINITON

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

#### 2. PROBLEM DEFINITION

#### 3. REQUIREMENTS

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#### 3.1. USER REQUIREMENTS

#### 3.2. SYSTEM REQUIREMENTS

#### 3.3. SOFTWARE REQUIREMENTS

#### 4. USERS OF THE SYSTEM

#### 5. DIAGRAMS

#### 5.1. USE CASE DIAGRAM

#### 5.2. ENTITY RELATIONSHIP DIAGRAM

#### 5.3. UNIFIED MODELING LANGUAGE DIAGRAM

#### 6. NORMALIZATION

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#### 6.1. 1NF FORM

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#### 6.2. 2NF FORM

#### 6.3. 3NF FORM

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

#### 6.4. BCNF FORM

#### 7. FUNCTIONAL DEPENDENCIES

#### 8. TABLES

#### 9. PROBLEM SOLUTION APPROACHS

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#### 9.1. OUTER RIGHT, OUTER LEFT, FULL OUTER

#### 9.2. TRIGGERS

#### 9.3. VIEWS

#### 9.4. ATOMIC TRANSACTIONS

#### 9.5. TASKS

#### 9.6. LAST ONE

Lorem Ipsum ..

# **END OF THE REPORT**

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