

PES UNIVERSITY

100 feet Ring Road, BSK 3rd Stage, Bengaluru 560085

Department of Computer Science and Engineering

Jan – May 2020

UE18CS252

Database Management Systems

Project Report

<Title of the Project>

PES120180<SRN4> <Full Name>

4th Sem Sec. [A/I] Roll No. 00

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| **PROJECT SUMMARY**  Write a summary: a few sentences from Introduction, a few sentences about the data model, a few sentences about the transactions, triggers and queries. And a sentence or two to conclude on the capabilities of your system. |

[**Introduction**](#_gwqiqapyxr0x) **2**

[**Data Model**](#_p451stoz4u81) **2**

[**FD and Normalization**](#_wc0v2611q54c) **2**

[**DDL**](#_pn441yprtk2f) **3**

[**Triggers**](#_a9bswny9ffj) **3**

[**SQL Queries**](#_exvna2br67rz) **3**

[**Conclusion**](#_k6bbxckcf51j) **3**

# Introduction

<<Write the miniworld description for entities and the transactions of the system.>>

# Data Model

<ER Model, Schema, and discussion on your choice of keys, data types if any.>

# FD and Normalization

<You will get a normalized set of relations if you develop using ER Model and converting ER to schema approach.

Still discuss when a 2nd normal form may be violated.

For example, In company schema-if you add employee name to works-on relationship table, 2nf is violated because ssn-name but the key is ssn, project\_number

2nf is also violated if you add a project name.

3nf is violated if you add the department name along with department number in employee table.

Even though you may not have any violations, have a few discussions like above examples in your report.

Identify the FD of your relations

Identify the normal forms of your relations

Identify when violations can happen (when you introduce additional columns) (A few examples)>

# DDL

<Create table scripts here. Ensure integrity constraints are defined.>

# Triggers

<Identify a constraint to implement as a trigger.

If you did not get any idea, check the notes and create a trigger for creating an audit-trail for insert/update/delete operations.>

# SQL Queries

<Write a few english sentences and SQL queries for them. Ensure Advanced at least 2 correlated-nested and 2 aggregate queries. 1 or 2 outer join queries>

# Conclusion

<Write a few sentences about the capabilities of your system, limitations and future enhancements>

**Formatting Guidelines** (make minor changes as required)

font, font size

Something like Calibri, Times New Roman, Verdana, etc.

Size 12, If too small increase to 14; if too big make it 10/11.

Left and right margin say 1 inch.

No. pages – no specific limit but few images could be also be included.