Project <PROJECT_NAME>

Student Name and ID
(email)

Use a splash page image here [optional]

Use *LaTeX* if you wish but use the general spacing and font/style you find here (1.5 spacing, 12-point font for text, etc.).

Be sure to submit a PDF (not a .DOC file) as your report. Overall, it will be about **25-30 pages**, including diagrams and screenshots. A significant portion of the report should be textual. Do not rely on images to write your report for you.

Remember, your project this year concerns a database for a food laboratory. Your database is intended to support the workings of the innovation processes within the laboratory. As such, identify the place of the database in the overall laboratory, and tell us how you would support its operations at the SQL level.

What to submit: This report, as a PDF, *and* the necessary SQL files to allow us to examine your database constructs and test your queries.

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1. Introduction

Introduce your vision of the project here. Describe the domain of the project, and the intended application. Characterize the nature and scale of the data you are working with. What role does your database design play within the larger system (as the database will not do everything, please say what you think it *should* do). Do not skimp on this section: it provides an important foundation for the project.

2. Database Plan: A Schematic View

In this section offer a high-level view of the database and its design. State what you think the principal entities are, as well as their main attributes and the key relations that connect them. Provide an E-R diagram (entities and tables) that illustrates your plan. Motivate your design – state why this way and not another.

3. Database Structure: A Normalized View

Describe the main tables in your database and the role played by each. Show that your database meets the definitions of 1NF, 2NF and 3NF normal forms. Is your database also in BCNF normal form? If so, explain how and why.

4. Database Views

What views do you provide onto your database? Justify each and define them here. Explain what each view is supposed to provide, and to whom it provides it. Is it wise or necessary to represent a certain relation as an SQL view? Be sure to specify your views (about 4 would be sufficient) and give examples of their use.

5. Procedural Elements

Does your design employ procedural extras such as database triggers (in PL/SQL or the MySQL equivalent format)? If so, describe and motivate each. If your design does not contain procedural extras, explain why, and say how you were able to do without these additions. Most projects have some scope for procedural elements (about 4 would be sufficient here).

6. Example Queries: Your Database In Action

Your database will provide a structure for the data in an application and a means of accessing and viewing that data. In this section show us the database in action, by providing sample queries and their outputs (please do not provide large data sets as outputs; summarize as appropriate). Provide specific queries to test on your database and tell us what those queries provide to the application. Use your existing database as the basis for your queries. If a query makes reference to any additional tables then provide example rows of this table in section 3.

You may use screenshots here but do not overfill your report with screenshots. Ensure that there is a cohesive argument expressed in the text of the report and that it is not simply a bag of diagrams and queries and screenshots. When you include images, make sure they are readable and actually add to the discussion.

7. Conclusions

Provide any concluding thoughts here. How might you build on this work for the future? How might your database support future developments?

Acknowledgements

Name check any person who helped you with this work. Acknowledge that the work is entirely your own, and that every sentence in this report was written by you and you alone. If you wish to quote another person or piece of work, place the quoted work in quotation marks and cite the author inline. Plagiarism is a very serious infraction that must be dealt with severely. Avoid any ambiguity on this point by citing things carefully!

References

List any bibliographical citations here [for people and work that you quote/cite in the main text of your report; please do include meaningful citations]