UNIVERSITI TEKNOLOGI MARA

ECS 358
CIVIL ENGINEERING DESIGN PROJECT

REINFORCED CONCRETE BUILDING DESIGN PROJECT
&
PROJECT BASED LEARNING

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DIPLOMA

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ACKNOWLEDGEMENT

I want to express my thankfulness to Allah SWT for giving us the information He freely gave us and for doing it in a way that was for our benefit. In the context of the ECS358 Civil Engineering Design Project, this final year project report was created for the Faculty of Civil Engineering at UiTM Cawangan Johor, Kampus Pasir Gudang.

I would like to extend my sincere gratitude to everyone who gave me the chance to finish this report. A special thank you to my lecturer, Ts. Ahmad Idzwan Bin Yusuf, for giving me the chance to complete this amazing project and for being so nice to me as I struggled to finish it. He has helped and supported me by giving me pertinent information. I couldn't have completed this project on time without him.

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A building code known as Uniform Building by Laws 1984, or simply UBBL 1984, was designed in Malaysia. Building-By-Law are the guidelines that the relevant government agencies have established and periodically update. All governmental and nongovernmental organizations operate in accordance with the local building codes. Any building plan submitted to the authorities that does not adhere to the relevant authority's building by laws is rejected.

Law requires that people comply with them, and anyone who doesn't will face penalties. This consistent development is made possible by the fact that these laws and rules apply to everyone. In Malaysia, the lead organizations and local governments are required to conduct building inspections, license applications, and clearance procedures.

These are just a few instances of UBBL 1984 being used in this project;

To sum up this project, I have gained knowledge of manual calculation techniques for building structural members. This report uses Prokon 5.0 to perform both manual and software calculations, and the values are based on my own assumptions. Before moving on with actual building work, all calculations in this report are referenced to the Eurocode2 to ensure that the design criteria are referred to the calculation method.

But in order to create a building, a house, or any other structure, we must be familiar with every aspect of the architectural designs. This is necessary since we have to adhere to the architect's specifications. The next step is to determine where to put the various structures, such as beams, columns, and loads on all slabs. After that, we may begin choosing the project's crucial structure and begin designing the building while taking that structure into account, such as the slabs and columns that will be joined to the vital beam. Detailing is essential on construction sites to ensure that the building is constructed exactly as specified in the contract document. Any omissions in the specifics will result in structural failure and unpleasant incidents happening on the job site.

Regarding the case study, it is crucial to evaluate the flexible pavement design of the road before construction begins. This needs to be considered so that we may create the appropriate pavement type for construction area. Rechecking the calculated data is necessary to minimize any software or manual calculation error.