



COMP 3110

ASSIGNMENT 3

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"I, Keerthana Madhavan 104995097, confirm that I have not received any unauthorized assistance in completing this assignment. I acknowledge that a mark of zero may be assigned for copied work."

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Q1: What are the differences between a domain model class diagram and a design class diagram?

Domain model describes the structure of the object-oriented system that supports the business processes in the problem that contains the logical organization of the objects to support the business processes without technical details.¹ Domain Model is also known as structural and conceptual model. It contains the conceptual classes, attributes and the relationships (aggregation, generalization, and association). It represents the logical model of an underlying problem domain.

Whereas, a class diagram is a static model that shows the classes and the relationships through graphical description. The class diagram depicts the software classes along with behaviors, states and the relationship between the classes. The elements of the class diagram include: A class, An attribute, An operation, An association, A generalization, An aggregation, and A composition.²

Q2: Using an example explain a weak entity in a data model?

A weak entity is a type of entity which its instances cannot exist independently and it also does not have its own primary/independent key in the system.

Q3: What is the purpose of the hardware and software specification?

Hardware and software specification describes the hardware/software components in detail to aid those responsible for purchasing those products.

Q4: Explain the object oriented three-layer design?

Q5: What is a control class in a design class diagram? Why is it required in object-oriented design?

¹ Dr. Roohollah's Notes Chapter 5 System Analysis – Domain Modeling

² System Analysis Design (5th ed), Alan Dennis, Barbara Haley Wixom, David Tegarden, 2012. Chapter 5. Pg 208