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CHARNCHEI SUPAARTAGORN : USING OBJECT-ORIENTED DATA  
MODEL TO DESIGN AN INFORMATION SYSTEM. PROJECT ADVISORS :  
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Information systems are needed in many application areas. The more information technology available to the society, the higher demand for information system development. Currently, designing and developing of information systems are complicated due to the diversity of data in the system, such as text, images, graphics, etc. The complexity comes from the difference in structure, management and presentation of data. This makes the designing and developing of information systems the most time consuming processes.

Relational model is one of the most popular and successful models used to design and develop information systems. This model is more appropriate to handle text data format. Therefore, it cannot solve the complexity of data problem, raised by multimedia data. In addition, this model does not address reusability of previous system.

In this research, an object-oriented data model was proposed as a methodology to help the developers in designing and developing an information system. The object-oriented concept describes everything as objects. An object includes the data elements and operations. This concept helps designers and developers to handle the related objects based on system modularity and reusability concept. This project uses an object-oriented approach to model multimedia data and uses multimedia information retrieval concept to present the data. There are four objects used to design the information system: Underlying Object, Interactive Object, Media Object and Layout Object. The Disease information system was selected to demonstrate the idea. In particular, an AIDS surveillance system is designed and developed. The Tuberculosis surveillance information system was finally developed as a means to verify the idea of reusability.