SYSTEM DEVELOPMENT AND PROJECT MANAGEMENT IN IT

CASE STUDY: ONLINE RESERVATION SYSTEM

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CASE DESCRIPTION

The primary purpose of this case study is for Project management in IT and Object oriented courses. Students examine realistic dialog and interview notes, as well as existing documents. For project management in IT courses, the students should be able to follow this realistic and fairly common case study of a small organization and conduct the planning, analysis, and develop the realistic system, using either a traditional or object-oriented approach. Deliverables would include new business process and data diagrams and modeling, and user interface designs, and this case study should require approximately 14-17 hours to complete, outside normal class time. In Object Oriented Programing courses, e.g., capstone courses for a computer information systems major, students can use this case study to not only analyze and design a solution, but actually develop the solution using various windows or web-based tools. The entire project should require approximately 22-28 hours to complete. The case study is of moderate difficulty – ranging from a four to five, and is designed for junior and senior level students, but could also be used for graduate courses.

CASE SYNOPSIS

Mr. xyz, an information systems lecturer at the local university, is at the Kuala Kangsar, trying to make reservation at local restaurant. However, due to unavailable of reservation system, he is unable to make an advance booking. Fortunately for Mr. xyz and his wife, who are celebrating their wedding anniversary, the restaurant office manager finds two seats which had not been claimed. In talking with the restaurant office manager, Mr. xyz starts thinking that he could perhaps help the theatre avoid this type of problem in the future. His students could design and build a system to help keep track of the booking, and hopefully help the restaurant become more efficient and improve customer satisfaction.

TEACHING NOTES

Case Purpose and Objectives

The purpose of this case study is to provide an opportunity for information systems students to apply system development, project management, and object oriented programing skills to a semi-realistic scenario. Additionally, students in object oriented programing courses can apply their knowledge and skills to design the class, as well as create a physical programing based on the information requirements in this case. Furthermore, students in project management courses can use this case as a comprehensive project, proceeding through the fundamental of project management and develop a working reservation system for the local restaurant. The interview notes and supporting documents help add a sense of reality.

METHODOLOGY

This case is based on the author's own experiences and has been modified to be more applicable to a classroom setting. The names and specific details have been changed. This case study presents a small but realistic opportunity for students to analyze, design, and develop online reservation system system for a local restaurant. The scenario should be fairly familiar to many students who have booking some product and understand the concept of reserved seating. This case study has been used by the author in project management in IT course with great interest and success and the author has incorporated suggestions from his students to enhance the case.

TEACHING SUGGESTIONS

This case is designed to be used as a major project in either project management in IT course or object oriented programing course. In my systems project management in IT courses, I generally have students work in teams of 4-5 to complete a project of this size. I introduce the project approximately halfway through the semester, after we have finished discussing the fundament of project management. The students are able to begin work on the planning (e.g., system proposal) and analysis requirements (e.g., process modeling, data modeling) while we begin discussing the design phase during class. As the students are completing the analysis work, they can then begin working on the design requirements (e.g., user interface design). The case is to be completed by the last week of the semester. The case is most appropriate at the undergraduate level, but could be used in graduate-level system development courses.

To incorporate the practice of project management, an additional requirement, particularly in a systems development/capstone course, could be added to develop a work breakdown structure, schedule, and budget using a tool such as Microsoft Project. The students should then keep track of their actual time worked and examine variances, illustrating the difficulty in developing time

estimates on system development projects. A discussion of the variances could be included in the pre-implementation review (for systems analysis and design) or post-implementation review (for system development/capstone). The pre(post)-implementation review is an excellent tool to allow the students to reflect on their project, identifying what went well, and also what did not go well. The review often touches on topics such as tools used, scheduling issues, group dynamics, etc.

As the instructor for the course in which this case is used, you will need to have both good technical skills and project management ability. Most likely the different groups in your class will be working on a variety of case studies and projects, and you will need to help them stay focused, e.g., with milestone deadlines, as well as help solve their technical issues.

PROPOSED SOLUTION

The suggested solution in the appendix is based on fundamental of project management and system development approach, but the case can certainly be conducted using a traditional approach, wherein the students would develop the new business process to make sure it alight with online reservation system.

CONCLUSION

This case study offers students an opportunity to apply concepts and fundamental learned in their project management in IT and Object oriented programing classes. The case is realistic, reasonably-sized for a major project in a semester-long course, and the scenario should be one in which they are somewhat familiar.

Instruction MANUAL

Course	Project Management in IT
Course Learning Outcomes	1. Understand the basic theory for managing information technology projects. 2. Mastering and exploring PMBOK (Project management Body of Knowledge).

	3. Students can practice PMBOK's theoretical understanding to solve problems in information technology project management.
Section/Chapter Course	Chapter 4-7
Section/Chapter Learning Outcomes	At the end of these chapters, students should be able to: 1- Analyze the overall of the project 2- Implement the project 3- Control the project

Geographic	Kuala Kangsar
Name of Industry	Restaurant
Year of Case Event	2017
Department/ Position Involved	-
Major Subjects and Issues	Online reservation system
Source of Data	Primary data: interview & reservation Secondary data: Previous study

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Synopsis of Case	make an advance booking. Fortunately for Mr. xyz and his wife, who are celebrating their wedding anniversary, the restaurant office manager finds two seats which had not been claimed. In talking with the restaurant office manager, Mr. xyz starts thinking that he could perhaps help the theatre avoid this type of problem in the future. His students could design and build a system to help keep track of the booking, and hopefully help the restaurant become more efficient and improve customer satisfaction.
Case Objectives	The purpose of this case study is to provide an opportunity for information systems students to apply data modeling, process modeling, and user interface design skills to a semi-realistic scenario. Additionally, students in database courses can apply their knowledge and skills to design the class diagram/entity relationship diagram, as well as create a physical database based on the information requirements in this case. Furthermore, students in system development/capstone courses can use this case as a comprehensive project, proceeding through the system development life cycle and develop a working ticket sales system for the restaurant. The interview notes and supporting documents help add a sense of reality.
Suggested Questions for Advance Assignment for Students	(1) Identify and elaborate the name of that system.
	(2) Explain the development of the current restaurant reservation system.
	(3) Briefly explain the functional and non-functional strengths of the

	online system.
	(4) List all the function that required for the system
	(5) identify the advantage and disadvantage of the system