

# **Theory Practical Correspondence Report**

**FOR**

## **Cab Management System**

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# Introduction

Key Concepts	Significance and Relevance	Real-world Contents	Inter-disciplinary connections	Critical Thinking	Technology, Tools and Techniques	Plan Project management	Project Sketch
Defining Software Engineering	Software Engineering defines how the internal modulation of how a software works and how it interacts with hardware.	Software Engineering helps the students to understand the making and designing of software.	It links the software with hardware modules and helps the module to run on cross platforms.	Software Engineering is different from other respective studies as it helps to differentiate the designing of software.	Involves learning about basic designing and structures of software.	Helps the project from start to end. Basic designing of the project.	We integrated all the above mentioned requirements into the project so as to deliver better performance on both ends.
Introduction to Software Development Life Cycle	This phase is important in getting to know how we will be proceeding with all the stages of the project, the software that we would be making.	It is necessary for all developers to follow a life cycle for their software. All professional software companies and developers are expected to follow this.	This can be used for any project as all the projects go through a life cycle that needs to be met at the various stages. This helps in keeping track of the progress of the project.	This helps the members in analyzing the requirements and mapping out the path of the project development , but might fail as members might not take it seriously.	GitHub, Google Docs, PhoneGap, Creately	Planned to follow the life cycle by 14th August,2016	Started following the lifecycle and project completed by 25th November, 2016

## Introduction to Software Development Life-cycle

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Requirements analysis, software design, coding, testing, maintenance, etc	A software development life cycle model is a descriptive and diagrammatic representation of the software life cycle.	Helps in analyzing the order of activities in a project stages.	It also captures the order in which software activities are to be undertaken.	Several models interface different kinds of procedures.	Life cycle model represent all the activities required to make software product transit through its life cycle phases.	The models are suitable for development of technically challenging software products that are prone to several kinds of risks.	We incorporated the Spiral Model into the project after researching and corresponds to our methodology to the module.

## Various Software Development Methodologies

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Various Software Development Methodologies	<p><b>Waterfall Model:</b> As the requirements changed, so waterfall is not the required model.</p> <p><b>Prototype Model:</b> As no such prototype was build for the customer to evaluate, rather a clear guidance is taken from the customer and worked upon.</p> <p><b>Spiral Model:</b> As the constant interaction with the customer after every single progress is not performed, hence this model is not chosen.</p> <p><b>Incremental Model:</b> This is the most suitable as the software is made in increments.</p>	It defines entry and exit criteria for every phase. A phase can start only if its phase-entry criteria have been satisfied.	Without software life cycle model the entry and exit criteria for a phase cannot be recognized.	Develop and validate the next level of the product after resolving the identified risks.	Progressively more complete version of the software gets built with each iteration around the spiral.	The spiral model is suitable for development of technically challenging software products that are prone to several kinds of risks.	We incorporated the Spiral Model into the project after researching and corresponding our methodology to the module.

	<p>After completion of work on one part , the second system is handled and in this way the project progresses.</p> <p><b>RAD Mode:</b> No sufficient human resource.</p>						
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## Software Requirement Specification

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Problem analysis, requirement specification , validation, metrics, monitoring and control.	The main objective of the SRS document is basically to describe the principal requirements engineering activities and to introduce techniques for requirements elicitation and analysis.	Without the SRS, the definition of the document is incomplete.	Plans to describe requirements validation and to discuss the role of requirements management in support of other requirements engineering processes.	Helps the project developers to draw parallels between the requirements so that they can be connected.	Requirement Traceability Matrix and Development Matrices help defining relationships.	Helps to understand the project even closely and in a better form and the SRS helped the developers to design the app even more efficiently.	System Features that presented the complete module of the app/project and have been explained.

## System Design

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Problem partitioning, abstraction, top-down and bottom-up design, Structured approach. Functional versus object-oriented approach, design specification and verification metrics, monitoring and control.	It is a formal way of representing how a business system interacts with its environment and illustrates the activities that are performed by the users of the system.	The design phase documents define the way the software is designed.	The design document works a cross between the requirement phase and the actual codes.	Design phase lays the foundation of how software actually gets designed.	The design phase requires the class diagrams, sequence diagrams and state diagrams.	After the design phase gets created, work starts upon the actual coding.	The design document works as an empirical part of the software development.

## Coding

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Top-down and bottom-up, structured programming, information hiding, programming style, and internal documentation. Verification, Metrics, monitoring and control.	The coding is the most intricate part of the software as it basically makes the software work.	Coding makes the software or app actually workable.	The coding makes the software actually go cross platform.	Working with the coding gives the complete idea of how each and every function works out.	The IDE that works on the code, scripts and frame works.	The codes get planned after the documentation on design and requirements and get completed before the testing.	The codes sketch out the whole project all in all.

## Testing

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Levels of testing functional testing, structural testing, test plane, test cases specification,	Goal of testing is finding faults in the software and demonstrating that there are no faults in the software (for the test	It is not possible to <i>prove</i> that there are no faults in the software	Testing the driving test cases automatically from a formal specification of the functional	The number of test cases increase exponentially with the number of input/output variables	J-Unit testing tools. We know that if we find an error during unit testing it is in the	Testing clearly removes out all the errors from the software plan.	Takes out bugs from the project codes.

reliability assessment	cases that has been used during testing)	using testing Testing should help locate errors, not just detect their presence	requirements		module we are testing		
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## Software Project Management

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Cost estimation; Project scheduling, Staffing, Software configuration management, Quality assurance, Project Monitoring, Risk management, etc.	It is an agile process that allows us to focus on delivering the highest business value in the shortest time.	The business sets the priorities.	It allows us to rapidly and repeatedly inspect actual working software (every two weeks to one month).	The project management is the most crucial part of the project that defines it.	Agile Scrum method, Continuous meetings and analysis.	Every two weeks to a month anyone can see real working software and decide to release it as is or continue to enhance for another iteration.	We followed this module and did rigorous brainstorming every week to develop and enhance the project development process.

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