THEORY PRACTICAL CORRESPONDENCE REPORT

FOR

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**Introduction**

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| Key Concepts | Significance and Relevance | Real-world Contents | Inter-disciplinary connections | Critical Thinking | Technology, Tools and Techniques | Plan Project management | Project Sketch |
| To define what software engineering is. | The application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software. Software engineering is relatively a new area of engineering though, | Software engineering aim is to reflect the human fluidity of seeing in a new way with fluidity software changing structure. We want software keep up changing with our imagination. | An interdisciplinary approach presents software engineering as a strategic, business-oriented interdisciplinary endeavor, simply a technical process as it has been described in previous publication. | In the critical thinking concept, the software developer should think out of box.  . | This include the tools which help for the building of software, technology basically focus on the language been used for the building the software. | It include the planning considering the factors such as time management etc. | The project sketch is a technical drawing of a project which will give you a rough idea of a project |

* **Introduction to Software Development Life-cycle**

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| A SDLC is essentially a series of step, or phase that provide a model for development. This involve Requirement analysis, software design, coding, testing.  We choose SDLC model. | A software development life cycle model is a descriptive and diagrammatic representation of the software life cycle. | Real world content help in analyzing the order of various phases and activities in the | It also captures the order in which software activities are to be undertaken. | Different models interface and 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 Waterfall model into the project after researching and corresponds to our methodology to the module. |

* **Various Software Development Methodologies**

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| Spiral model. Prototyping, Waterfall model, interactive enhancement, Role of Management in software development. Role of metrics and measurement. | It is a descriptive and diagrammatic representation of the software life cycle. | It defines entry and exit criteria for every phase. A phase can start only if its phase-entry criteria have been satisfied. | If You do not have software life cycle model the entry and exit criteria of any phase can’t 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. | The Waterfall model is suitable for development of technically challenging software products that are prone to several kinds of risks. | We incorporated the Water fall model into the project after researching and corresponding our methodology to the module. |

* **Software Requirement Specification**

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| Problem analysis, requirement specification, validation, metrics, monitoring and control. | The SRS is documented in such a way that it break the deliverable into smaller components. The information is organized in such a way that the developer will not only understand the boundary with in which they have to work but also the functionality need to be developed and in what order. | 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 WebApp even more efficiently. | System Features that presented the complete module of the project and have been explained. |

* **System Design**

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| Monitoring and control, Abstraction, top-down and bottom-up design, Problem portioning, Structured approach. Functional versus object-oriented approach, design specification and verification metrics, monitoring and control. | You can share a problem with the management team and team will give the best possible responsible. | 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 and the code should be efficient so that it work perfectly. | Efficient coding and using CDN in webpage makes the webpage load fast. | 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 such as notepad++, codeblock 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, reliability assessment | Goal of this rating system is to earn the customers response on the different components of the services and hence improve the services. | The management team will further manage the services and improve. It not only look at the rates it also update facilities to improve their services. | Testing the driving test cases automatically from a formal specification of the functional requirements | 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 module we are testing | Testing clearly removes out all the errors from the software plan. | Takes out bugs from the project codes. |

* **Software Project Management**

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| The ratings will be recorded and an average will be found on the basis of which proper actions will be taken. The comments and suggestions will be seen and managed accordingly. | It will allow the institute to know about the present status of the services and updating will be done simultaneously. | This will improve the connection between the management team and the customers. | 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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