Chapter-wise Content Guidelines for Development Projects

Final Year BCS (April 2013)

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| **Chapter #** | **Chapter Title** | **Proposed Contents** |
| 1 | Introduction | 1. General introduction of the system under study and its important features and functions. 2. A short description of client-side statement of purpose should be provided.   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Introduction**   * Discuss implementation area of the project and identify the need for this mobile application.   **Project Motivation (your project background section)**   * Why this mobile application is needed? * Talk about your project and how it will address the issues * How this mobile application will be useful? * Who will benefit from this application * What mobile platform you want to use for this app. Android?   **Project Objectives (list them)**   * List those tasks that will complete to complete the overall complete project. * For example, requirements analysis, * System design, interface design , android app developments, testing …   **Structure of the report** |
| 2 | **Requirements and Feasibility Analysis**  ~~Feasibility and Analysis~~ | **Requirements Engineering**   1. Overview of the basic system requirements, identify stakeholders 2. Functional requirements in detail (user scenarios/user viewpoints) major use-cases that the system will implement. (analysis model if more detail is required)   Non-functional requirements  **Feasibility Analysis**   1. Detailed description of the functions of the system under study advantages, drawbacks, problems etc. 2. “Formal problem statement” 3. Proposed system (brief discussion on why this solution is selected, other candidate solutions may also be specified) 4. Objectives and main functions to be provided by the new proposed system.   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **List all the functional requirements to be implemented by the project.**   * Draw use case diagrams.   **List non-functional requirements**  **Mention how each functional requirement is feasible in terms of available technologies.**  **How is it feasible in the time duration? Give project plan in terms of weeks.**  **How much will the project cost? Cost estimation. Will you need any additional software/hardware to purchase?** |
| 3 | Design | 1. **Architecture design**: Brief introduction of basic system components, type of architecture selected, high level system model, design decisions regarding selected h/w and s/w, backup requirements 2. **Component level design**: Refine/detail architecture to components (breakdown of high level system model) 3. **Data design**: identify entities, attributes, ERDs (can provide data structures) 4. **User Interface design**: UI design decisions (approach, fonts, styles, formatting, design tools used), incorporate paper mockups, UI implementation: Include screens with short description   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Draw architecture of the whole system. Module level.**   * Camera, GPS module, client application, Webserver, internet connectivity. * ~~Motion Sensor, Human Sensor, Controller, Mobile Applications,~~ * ~~Power, Web Server, Camera….~~ * Level implementation technologies level details to the implementation chapter.   **Additional items:**  **Database designs,ERDs if any.**  **DFDs:** which component will retrieve GPS location, which component will take image, text about event, usernames, …  **State Transition Diagrams: talk about in terms of screens / activities.** |
| 4 | Implementation | 1. High level description of major program modules (module name, short description, data tables used, error handling), Flow charts, code snippets,   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **Show how you implemented the application**  **Draw system architecture of the whole system that includes GPS sensor, android device, camera, internet, webserver, database,**  **Which tools you used to develop the application**  **Which mobile platform did you target to implement the app.**  **Discuss how you send messages and what api and technologies you used.**  **Use mobile screenshots of the application**  **And show different events and messages.** |
| 5 | Testing | 1. Test strategy considered throughout the development process (test first, unit test,..), test tools used, major test code, test results, UI testing : strategy, test results   \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  **How you tested the system.**  **Identify test scenarios.**  **Test all scenarios in the home.**  **Show how you tested each** |
| ~~6~~ | ~~Deployment~~ | 1. ~~Major implementation tasks (to-dos for implementation) schedule, implantation support (simulators, trackers, etc. Any other special h/w, s/w support, personnel support required), Staff training, system manual, implantation strategy, (implementation/deployment script, if any)~~ |