CSI Developer's Procedures Content Specifications

The CSI Developer's Procedures provides a road map of development methodology, procedures, and guidelines. This map helps the entire development process, from conception through planning, design, and construction to implementation and delivery.

Document Objectives

The objectives of the CSI Developer's Procedures is to help individuals streamline and codify software development. It also helps managers plan projects more accurately.

Because projects can require different types of information, this document will be as generally specific (or specifically general) as is workable. That is, each chapter must address a step of the development process without being, on the one hand, too restrictive, and on the other hand, too vague. So, each document-centric chapter contains a discussion of the document in question, the CSI process that occurs to create that document, and paragraphs that describe elements of the document.

After going through the document, users will be able to perform tasks based on their user type. These tasks include the following:

- Product managers will be able to—
  - Manage projects from inception to completion
  - Follow a format for writing software planning documents
  - Keep individuals informed about progress
- Lead engineers will be able to—
  - Be aware of quality concerns throughout a project's lifecyle
  - Design products
  - Calculate accurate estimates based on realistic specifications
- Engineers will be able to—
  - Follow specific guidelines
  - Stay in synch with other engineers

- QA personnel will be able to—
  - Help review and validate specifications and designs
  - Create test plans based on development
- The documentation group will be able to—
  - Create information plans, project plans, and content specifications based on developer's information
  - React more quickly to changes in a product or feature's documentation needs
  - Provide technical writing support to the development community in order to enhance corporate standards

Preliminary Document Organization

The document's organization reflects the process that occurs in developing new applications or maintaining existing ones. It includes chapters that are specific to each stage of the development process without being too proscriptive.

Contents

The guide is reference oriented and includes the following:

- Chapter 1, "Developer's Procedures Overview"
- Chapter 2, "Project Management"
- Chapter 3, "Quality Assurance"
- Chapter 4, "Functional Requirements"
- Chapter 5, "Technical Specifications"
- Chapter 6, "Design"
- Chapter 7, "Construction"
- Chapter 8, "Project Review"
- Appendix A, "Document Samples"
- Appendix B, "Timesheet Sample"
- Glossary
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Overview by Chapter

Developer's Procedures Overview

- Purpose of the guide. This section of the chapter points out why CSI is codifying developer's procedures. This section also discusses the fact that software development entails many methodologies. In addition, this section refers to sources such as Rapid Development, Code Complete, and Debugging the Software Process.
- Description of the audience. This section explains who should read the document.
- "About this book" section:
  - Overview of the guide's contents. This section briefly outlines the chapters and their contents.
  - Document conventions. This section illustrates the way the guide shows keystrokes, samples of code, and other typographic conventions. This section also provides information about any other document-specific writing conventions.

Project Management

- Overview of CSI project management. This section discusses basic areas of responsibility, but it doesn't provide procedures on how to use Microsoft Project or Platinum's Enterprise Project Management.
- Purpose of project planning. This section discusses the importance of planning each project. This way, project managers and others can track progress, recognize potential
- Time tracking. This section provides details on how project managers track time against a project. This section also discusses how each person records time. This record-keeping includes instructions on filling out timesheets.
- Purpose of timesheets. This section discusses the impact of timekeeping on project management. It also provides visibility into planning methodology at CSI.
- Timesheet process:
  - Fill in every day.
  - Provide to managers at end of the week.
  - Managers review timesheets and then send them to Stephanie.
  - Stephanie enter numbers into project management tool.
  - Managers generate reports as necessary.

Quality Assurance

- Purpose of quality assurance (QA). This section provides an overview of QA methodology and describes how it relates to CSI.
- Defect control. This section outlines how CSI will avoid creating defec-

tive products. This section includes information about testing methodologies as they apply to CSI.

Functional Requirements Document (FRED)

- Purpose of a FRED. A FRED discusses the what of the function or application being created. This section also includes a definition of functional requirements.
- Process to follow when completing the document. This includes description of who originates the document, who reviews it, and who approves it. Approvals include the product manager (PM) and the vice president of engineering (VPE). Reviews include the technical lead (TL), the quality assurance manager (QA), and the manager of documentation (MOD).
- FRED organization
  - **Introduction** to the application or individual function being created. This section also includes the purpose of the function (including its scope).
  - **Common elements** such as functional and product requirements. These include items such as the platform, the data model, and features & functions
  - **Dependencies** and assumptions
  - **Integration requirements** include elements such as whether the function needs to be Oracle native, what the specific data access layer is, and whether this function must interface with other applications.

Technical Specifications Document (TECHSPED)

- Purpose of a TECHSPED. This document discusses the how of the requirement. It's a detailed document.
- Process to follow when completing the document. This includes description of who originates the document, who reviews it, and who approves it. Approvals include the VPE, PM, and TL. Reviews include QA and MOD.
- TECHSPED organization
  - **Introduction** to the application or individual function being created. This section also includes the purpose of the function (including its scope).
  - **Purpose** of the function (also including scope)
  - **Interface** specifications such as menu characteristics
  - **Fields** as appropriate

Design Document (DESIDOC)

- Purpose of a DESIDOC. This document discusses the what of the requirement. It also contains the rules of engagement for constructing the application or specific function the project entails.

- Process to follow when completing the document. This includes description of who originates the document, who reviews it, and who approves it. Approvals include the TL. Reviews include the PM, QA, and VPE.
- DESIDOC organization
  - **Introduction** to the function
  - **Purpose** of the function
  - **Principal data structure** of the function (the way key data is organized most often shapes the structure of the entire program)
  - **Functions**, algorithms, heuristics, or special techniques
  - **Design components** such as interface exposure, the process flow, database layout, function names, libraries, PDL, error handling methods, performance considerations, limitations, inputs and outputs, trade-offs, and annotations.

Construction

- Description of construction events. This section defines construction as those activities that implement the planning documents.
- Potentially, this section oultines coding conventions. More than likely, this section refers the reader to either an appendix or another document. However, this section does discuss the need for adherence to standards at CSI.

Project Review

- Purpose of project reviews. This section discusses the importance of reviewing each project.
- Contents of a project review. While a project review doesn't need a specific, formal document like the functional requirements or technical specifications do, a project review should answer these questions:
  - What did we do right?
  - What could we improve on?
  - How well did the project meet its orignial intent?
- Process to follow when conducting a project review. This section includes the information gathering process for a project review.

Appendix A, "Sample Documents"

- This appendix contains samples of each type of developer's document.

Appendix B, "Sample Timesheet"

- This appendix contains a sample of a timesheet.

Glossary

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