# 智产智融
## Smart P&L

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# Project Development Plan

## by Sparklefish

# Directory

## 1. Introduction

### 1.1 The Purpose of Writing

The preparation of this document is intended to aims at making prepare all things during software development, which include everyone's responsibility, project team organizational structure, and development progress, environmental conditions of hardware and software, economic budget and risk countermeasures. It makes members to understand the project better and makes them to realize themselves responsibilities to ensure that the project work in an orderly manner and that the project team to complete the project on time and durability goals. What's more, The plan is the basis for administrator to manage and control the team. The intended audience for this document is all members of this team and the instructor.

### 1.2 Project Overview

With the rapid development of China's economy, the number of small and medium-sized enterprises is also growing rapidly, and they are playing more and more important roles in the country's economic aspect. According to the statistics data from the National Administration for Industry and Commerce of China, in 2013 the total amount of China's small and medium enterprises and individual industrial and commercial households registered has more than 15 million. By the end of 2016 the number will be more than 70 million. With the annual growth rate of more than 10%, it is estimated that by 2020, China's small and medium enterprises and individual industrial and commercial households will be more than 90 million. SMEs have accounted for more than 99% of the total number of enterprises. According to the guiding spirit of the 18th National People 's Congress, it is important to "promote public entrepreneurship innovation, and constantly

cultivate new, new kinetic energy to promote sustained and healthy development of small and medium enterprises". With the implement of the next 5 year plan and the in-depth development of China's market economy, the number and size of small and medium enterprises will continue to develop.

While small and medium enterprises are booming, the financing environment for small and medium-sized enterprises is very bad. According to the data from Bank of China released in 2014, we found that by June 2013, the total number of small and medium enterprises has reached 56.51 million yet less than 10% of them could obtain credit support from the bank. China's SME is currently facing problems in difficult financing processes, limited financing channels, high financing costs, and the problem is becoming increasing hard.

Based on this development background, "Smart p&l" SME financing platform firmly grasp the market development opportunities and access to SME financing market. We are committed to improving the financing of small and medium enterprises, reducing the financing costs of small and medium enterprises, and to provide convenient and standardized services in credit audit and risk assessment for SMEs financing.

## 1.3 References

1．System requirements specification for "Smart p&l"

2．Document writing reference：*Guide to the Development of Computer Software Product Development (GB 8567-88)*; *HB 6465-1990 Software documentation specification*

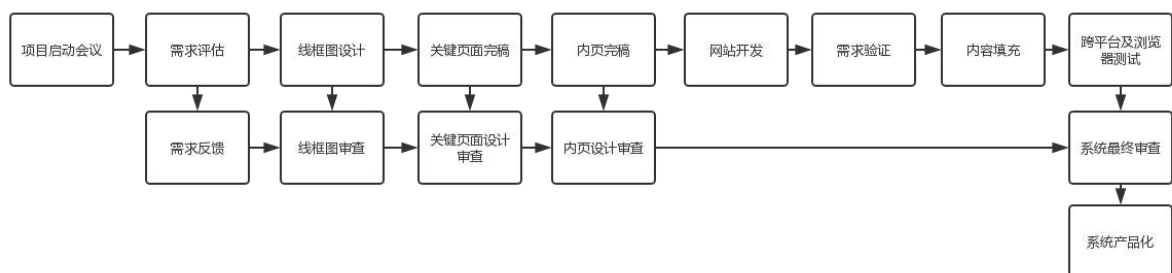3．*Software Engineering - Practitioners' Research Methods (Sixth Edition)*

Roger S. Pressman, Zheng Renjie, Ma Suxia, Bai Xiaoying Translator, Mechanical Industry Press

## 2. Project Overview

### 2.1 Work Content



1)Project Feasibility Study**:** determine the development goals of the system and the general requirements, feasibility analysis options analysis, investment - benefit analysis, feasibility study report writing.

2)Project development plan：Unified understanding of project development background and objectives, develop a clear start and end time, personnel assigned tasks, standardizing the project development process, the use of work flow chart and other auxiliary tools to formulate development plans.

3) Requirements Analysis: Using object-oriented approach (UML) systematic project needs analysis to determine the function of the target system, performance requirements and design constraints, etc., through the application of environmental issues and their understanding and analysis of the problem information design, function and system

behavior modeling and the preparation of requirements specifications.

4) Wireframe design: wireframe sketches website is popular in terms of the framework is the website designer web design standards will be based on customer demand for a show graphical form. By wireframe design, information site, structure, content, functionality and other performance acts have a good interface, to better serve the communication and discussion of the project.

5) Finalization of key pages: wireframe, based on clear procedures relationship between each of the major components of the Web site home page and other pages that landing page design and code implementation.

6) Inside finalized: the distribution and processing system structure, module division, functions as further described and achieve other pages except home outside.

7) Program development: complete coding of all pages, compile and debug debug get free grammar wrong code.

8) Demand Verification: functional needs feedback page if needed to achieve the complete verification.

9) Content filling: According to the project objectives have been completed on the part of the pages filled with pictures and information.

10) Cross-platform and browser testing: assurance by testing on different platforms and different browsers can achieve normal operation of the system.

11) Final review of the system: The system specification, system design and coding final review, the purpose is to find the system design process and any errors caused by the negligence of implementation. Find and eliminate latent errors in the system, recording a system test and analysis reports.

12) System products: the preparation of user manuals and operating manuals for project generation system, help documentation.

## 2.2 Product

### 2.2.1 About System

**System Name**："Smart p&l" platform

**Front-end**：html, css, scss, vue framework

**Back-end**：express framework, node.js

**Development Tools**：

    **Development Environment**：Webstorm、VSCode、Atom

    **Project Hosting**：GitHub

    **Code style uniformity and quality inspection tool**：Eslint

    **API Testing**：Postman

    **Database visualization**：Robomongo

    **Automatically build tools**：Gulp、Webpack

    **Automatic restart tool**：nodemon

### 2.2.2 Files

1）User Manual: This document describes the main features and performance of the system, to make the operating environment requirements, and describes the installation and use of specific operating software, error handling, etc.

2）System maintenance manual: including instructions about the system, modules instructions, operating environment, support system description, the process of maintenance instructions, which make it easy to maintain the system.

### 2.2.3 Services

The project team will send someone to provide users with installation and training to use, so that users are familiar with the operating system, and applied to practical work, improve work efficiency.

The project team will track the user's use of the system within the system six months after delivery of error raised by users, repair maintenance, and provide the necessary technical support.

After the deadline, if not any bug in the system is found, the system will be maintained by specified system administrators.

### 2.2.4 Non-transfer Products

（1）Project Development Plan: It describes the background and objectives of the project development, start and end time, developers, developers, process specifications and schedule.

（2）System Requirements Specification: It describes information about the system's function, behavior, performance, design constraints, etc., and acts as a basis for future delivery and acceptance.

（3）Database design instructions: It details the design of the database, including conceptual design data tables, logical design and physical design.

（4）Outline design specification: description about the design of the documentation for the system.

（5）Detailed design specification: The algorithmic representation and data structure are further described and the design details of each module in each system hierarchy are specified.

（6）Test plan: to develop test procedures for each module and the overall system design data and test tools, and provide test results and expectations of prospective measurement scales.

（7）Test Analysis Report: Record the results of tests and found that the implementation analysis system functions, defects and limitations, and to propose changes and evaluation.

（8）Source: All the code and comments.

## 2.3 Acceptance Criteria

Finally, within the group prior to delivery customer review compliance with HB6465 coding standards, consistent with the documentation, code writing style uniform, determine the code to achieve customers' requirements specification "set forth in the functionality, performance and other requirements, to effectively control the different access rights of the user, the security required to meet customer requirements, and the error rate to a minimum to prevent the following error: loss of data caused by system defects, not meeting the design requirements, the response time that is too long to accept other issues.

For all types of documents generated during the project development process, in accordance with the "Guidelines for the preparation of computer software product development files" (GB8567-88) criteria to assess and acceptance.

## 2.4 The deadline for completing the project

As planned, the project will be completed no later than September 15, 2017. The developer reserves the right to make partial adjustments to the development time schedule.

# 3. Implementation Plan

## 3.1 Task Decomposition and Personnel Division

### 3.1.1 The overall role of the division of labor:

**Project management:** Responsible for the overall planning, development of project development plan, organize and coordinate the work group members, manage the project development process, the meeting, members of the task assigned work, keep in touch with customers, preparation of project development plan and project summary reporting, monitoring and tracking SDP, organize documents assessment and project estimates.

**Market and demand analysis:** Analysis and optimization of the project market demand, feasibility, profitability, market risk, and the design of business process and details on the system.

**UI design and document layout:** Responsible for the appearance of the system interface design and landscaping, as well as the project related to the layout of the document.

**System Development:** Design the interface according to the UI diagram, and achieve the functions and the corresponding business processes according to the needs of the system, as well as the system testing and maintenance

**Quality administrator and development engineer:** Inconsistencies within the organization handling the project can not be resolved, periodic inspection report, is responsible for planning software quality assurance activities, testing software products or activities on the available standards, needs and level of compliance with the rules and

found deviations organizations to develop corrective, preventive measures and supervise the correct to ensure the development progress of work.

**Database administrators and testers:** Responsible for database design, system storage solutions, user registration database, maintaining database security, access control and monitor user access to the database to develop a database backup plan for disaster recovery database information appears, based on the system test plan template to develop test plan, execute test plans and test system to test and record defects found, provide test reports.

**Meeting recorder and documentation administrator:** Organize meetings and is responsible for the preservation and management review records relating to the project's technical documentation, standards and procedures for approval last modification of the document, record modification time, and regularly reporting to the project manager. Documentation administrators and members, is responsible for participating in the preparation of the document, the document changes and to discuss software design each chart production.

### 3.1.2 Details of The Division of Labor

**Project management: Shukui, Zhuang**

**Market and demand analysis：Kaiyun, Siqi, Huiyu , Wangliang, Zhengjie**

**UI design and document layout: Jieqi, Fengyi, Taoli**

**System development：Weilin, Zhuchu, Shukui**

**Database administrators and testers:** Zhuchu, Weilin

**Meeting recorder and documentation administrator:** Kaiyun, Shukui

## 3.2 Progress

| Project Schedule | |
|---|---|
| 1. Determine the Topics 7.10 ~7.27 | Formation of the Team，Brainstorm |
| 2. Design Project 7.28-8.08 | Design project management functions and user interaction<br>Themes writing code, test development environment<br>Design Logo, complete the basic interface design |
| 3. Overall Construction 8.09-9.10 | Refine the project functions, combined with the financial knowledge and market analysis for real-time update feature<br>Write back-end performance, and complete user interface front desk<br>Complete all interface design, interface design documentation |
| 4. Sprint Stage 9.11-9.15 | Optimization system extensibility, enhanced performance<br>Finish writing documentation, complete the "User Operating Instructions", "test report" and complete translation of the document, prepare PPT and other display materials |

## 4. Support Conditions

## 4.1 Computer Systems Support

Windows family of operating systems, Opera, chrome, Firefox and other browsers, servers (Apache)

## 4.2 Work to Be Undertaken by The User

The development team need detailed information about the function of the system requirements, performance, design constraints, and other demands provided by users.