 <p>ETH Eidgenössische Technische Hochschule Zürich Swiss Federal Institute of Technology Zurich</p>	<p>Software Requirements Spec for Hakuna Software Project Management</p>	<p>Author: Mahua Mukherjee, Farhana Hossain</p> <p>Doc.No.: HSPM_SRS_1.0</p> <p>Date: 2006-12-05</p> <p>Page of Pages: 1 of 9</p>
---	---	---

Contents

1	INTRODUCTION	3
1.1	Purpose	3
1.2	Scope	3
1.3	Definitions, Acronyms and Abbreviations	3
1.4	References	4
1.5	Overview	4
2	OVERALL DESCRIPTION.....	5
3	SPECIFIC REQUIREMENTS	6
3.1	Functionality	6
3.1.1	Login	6
3.1.2	Monitor Projects.....	6
3.1.3	Show project details	6
3.1.4	Add Project	6
3.1.5	Add new team leader.....	7
3.1.6	Delete project	7
3.1.7	Report.....	7
3.2	Usability.....	8
3.3	Reliability.....	9
3.3.1	Availability.....	9
3.3.2	Mean Time Between Failures.....	9
3.3.3	Mean Time to Repair	9
3.3.4	Defect Rate.....	9
3.3.5	Bugs	9
3.4	Performance.....	10
3.4.1	Response time.....	10
3.4.2	Throughput	10
3.4.3	Capacity.....	10
3.4.4	Degradation mode	10
3.4.5	Resource utilization	10
3.5	Maintainability	10
3.5.1	Backing up data.....	10
3.6	Design Constraints.....	11
3.6.1	Architectural Requirement	11
3.6.2	Software Languages.....	11
3.7	On-line User Documentation and Help System Requirements	11
3.8	Purchased Components.....	11
3.9	Interfaces	12
3.9.1	User Interfaces	12
3.9.2	Hardware Interfaces	12
3.9.3	Software Interfaces.....	12
3.9.4	Communications Interfaces	12
3.10	Licensing Requirements	12
3.11	Legal, Copyright, and Other Notices.....	12
3.12	Applicable Standards.....	13
4	SUPPORTING INFORMATION.....	13

Revision History

Date	Version	Description	Author(s)
2006-12-05	1.0	Initial Creation	Mahua Mukherjee, Farhana Hossain

1 Introduction

1.1 Purpose

The purpose behind this SRS document is to inform readers about the functionalities which will be supported by the Hakuna software project management system and detail functional and non-functional specification for one of the pre-defined user groups.

1.2 Scope

Hakuna software project management system is a software application, which will help organisations to manage projects. The data captured and collected from various sources within the organisation will be stored centrally thereby allowing different stakeholders to use the data in a way they think is useful for them.

For the development of the base-product different stakeholders are treated as different User groups with different access rights and functionalities. The base product will allow certain pre-defined groups and pre-defined functionalities associated with each group.

Although technical design will allow enhanced functionalities which will include addition of other user groups and associated functionality, the current scope of the document is to provide readers with an idea of the base version of the HSPM system.

In addition, the document will provide detailed functional and performance requirements for one of the pre-defined user group which is the 'M' group or the Management User group.

1.3 Definitions, Acronyms and Abbreviations

Abbreviation	Definition
SRS	Software Requirement Specification
PDA	Personal Digital Assistant
HSPM	Hakuna Software Project Management system
'M' User	Management User group
'L' User	Team Leader User group
'S' User	System administrator User group
'T' User	Team Member User group
UI	User Interface
Tbs	To be specified
Tbd	To be done
OSS	Open Source Software

Term	Definition
Browser	The application that allows for viewing of web content such as HTML documents
Pie Chart	As defined in http://en.wikipedia.org/wiki/Pie_chart
Bar Chart	As defined in http://en.wikipedia.org/wiki/bar_chart

1.4 References

Following specification and training materials are used to write this SRS.

http://se.ethz.ch/teaching/ws2006/0273/slides/outsourcing_20_requirements.pdf

<http://se.ethz.ch/teaching/ws2006/0273/slides/Template%20Software%20Requirements%20Spec.pdf>

<http://se.ethz.ch/teaching/ws2006/0273/slides/Checklist%20RequirementsSpec.pdf>

<http://se.ethz.ch/teaching/ws2006/0273/slides/Effective%20Requirements.pdf>

1.5 Overview

The remainder of this document deals with the introductory description of the system, functional specification for 'M' user group, Usability and performance specification for version 1.0

2 Overall Description

The product will require Microsoft Internet Explorer, Netscape Navigator, Mozilla web browser, and Microsoft Windows, Linux or Macintosh operating systems.

The product will require My SQL 4.1, Python 2.3 with Chart Director Library.

The product will have web interface with login/group/password for different user. The base version will provide one administrator access. All other users, groups will have to be registered after installation.

The product will run on a PC with a processor greater than Intel Pentium or compatible, 32 MB of RAM, display resolution of 640x480 and 5 MB of hard disk space; or Macintosh G3 with a 233 MHz or greater processor, and comparable display, memory, and hard disk space requirements. Systems are also required to have keyboard and mouse input devices.

The product will not support PDA or other small devices. It is only supported on PC's.

The product send notification and reports through emails, so all the registered users have to provide email address.

The product does not need any new or special hardware.

The Hakuna Software Project Management system will support four User Groups. Every user in the system must be in one of the groups mentioned below. Each group and the functions allowed for the group are specified.

Management ('M')- Defining a new project, adding a team leader to the pool of team leaders, assigning and re-assigning projects to team leader, viewing overall project status report, The added functionality will include defining report formats in which the data needs to be displayed for easier interpretation.

Team Leader ('L')- for planning schedule, allocating resource for each identified task, identifying dependencies between tasks within a project, viewing and requesting status on each task and subtask from the team member, viewing bug report from bug tracking system, linking documents from the document management system, tracking results from Test system, defining and updating Milestones, accessing Personal Information system, escalating issues.

System administrator ('S')- maintaining, updating and upgrading HSPM system, user rights,. Supporting the tool on Windows (XP and perhaps Vista) , Linux and MAC OS.

Team member ('T')- updating task status, planning vacation, check-in/ checkout code, peer code review, updating bug tracking system.

3 Specific Requirements

3.1 Functionality

3.1.1 Login

There will be a login page at the beginning. Every 'M' user has to provide login/ password to use the tool.

3.1.2 Monitor Projects

After login, first page will be Monitor page.

Monitor page will list first 20 currently running projects, sorted on 'Project Names'.

Pressing 'next' and 'prev' button will display next/ previous 20 projects.

For each project – check box, project name, type of project, project leader and start date will be shown.

Project name will be click able and clicking the project name will display project details (details in section 3.1.3)

Clicking 'Add Project' button will open another page to add new project. Details in section 3.1.4

Select project using check box. Clicking 'Delete Project' button will delete the selected project.

Details in section 3.1.6

Click 'Report' to open the page for report generation (details in section 3.1.7).

3.1.3 Show project details

Tbs

3.1.4 Add Project

To add a new project minimum required data –name of project, name of the Team Leader for the project, type of project, start date of the project.

Project Name – Any alphanumeric English name. Ie. Name consisting [A...Za...z0...9]

Team Leader – Select Team leader from the list. For new team leader press 'AddTeamLeader' button (details in section 3.1.5).

Type of project – Select type from the list provided. Define the list of types for project. The list is required from the customer

Start Date – Select date from the calendar in next.

Press 'OK'.

After adding new project, the project will be available for other users to view within 30 minutes.

3.1.5 Add new team leader

To add new team leader name in the database, type the name (within 40 chars) in the 'Name' text box, press 'Check Display Name' button. This shows how the name will be displayed. If the display name is ok, press 'OK', else press 'BACK' and modify the name in the text box.

3.1.6 Delete project

Select project from checkbox. Press 'Delete Project'. Pressing the delete button will ask for confirmation as 'Yes' or 'No'. Pressing 'Yes' will delete the project from the system database.

Pressing 'No' will cancel the delete request. Deletion project is possible if all the tasks of the project are closed.

Deleting all data relevant to this project will need up to 24 hours.

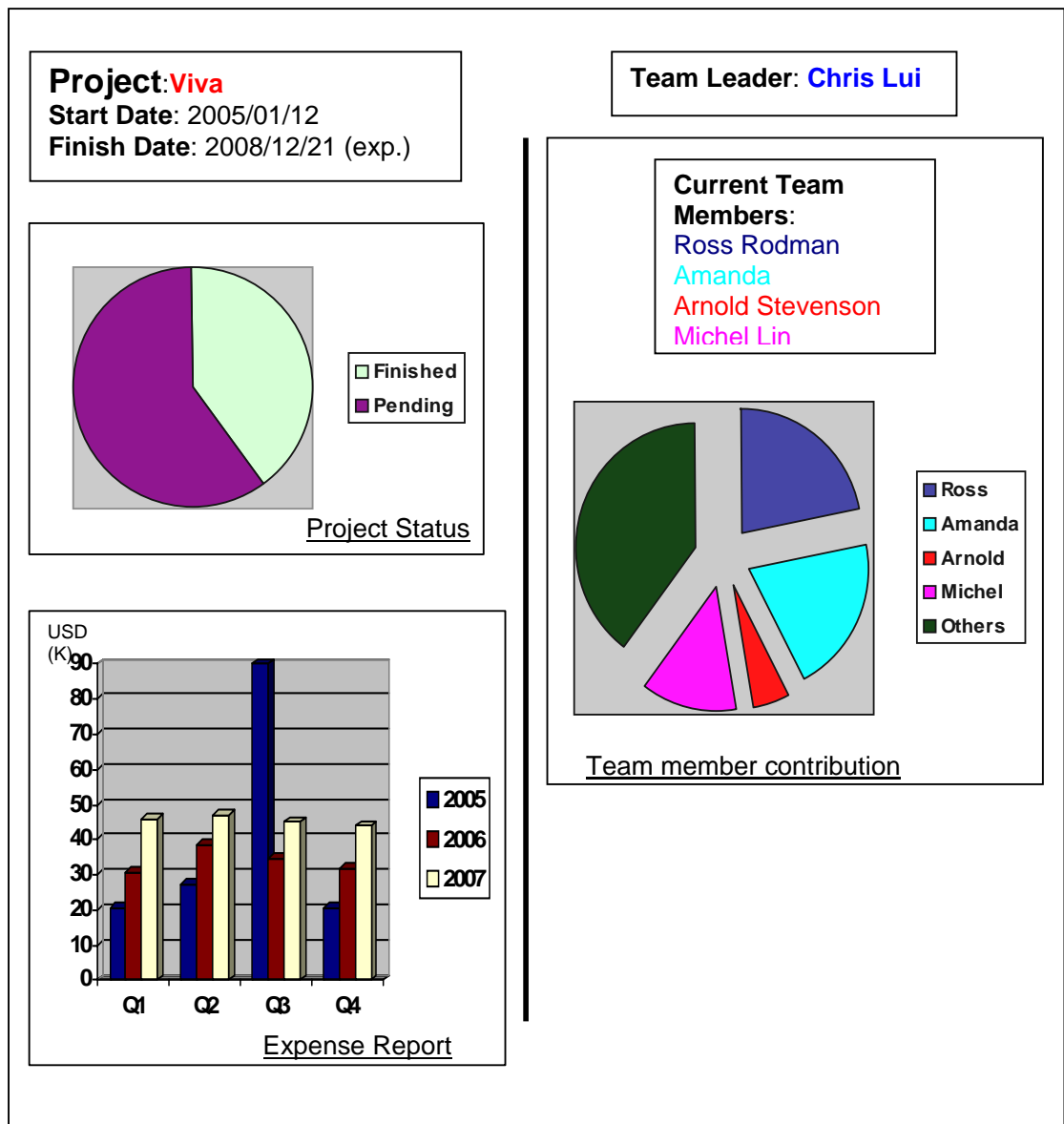
3.1.7 Report

Select project check box, press 'Report' button. This will generate project report and open another page to show the followings statistics –

Project Task Schedule, Percentage of project completed, a pie chart showing team members involved, Bar chart showing Expense and Income per year/quarter/month.

In version 1.0 Reports can also be generated with data uploaded from Microsoft Excel.

Following is the sample for generated report –



Requirements for other type of reports are "under construction".

3.2 Usability

The main criteria for making the system usable is the difficulty of performing each task. Difficulty depends on the number of steps, the knowledge that the user must have at each step, the decisions that the user must make at each step, and the mechanics of each step (e.g., typing a team leader's name exactly is hard, selecting name from a list is easy). The user interface will be as familiar as possible to users who have used other web applications and Windows desktop applications. E.g., we will follow the UI guidelines for naming menus, buttons, and dialog boxes whenever possible. An experienced user will be able to use the system after four hours training.

No other specific usability requirement has been identified.

3.3 Reliability

3.3.1 Availability

The system will be available always, other than Wednesday from 3 p.m. – 6 p.m. (kept for regular maintenance)

3.3.2 Mean Time Between Failures

50000 hours.

3.3.3 Mean Time to Repair

Within 1 hour after the operation has failed.

3.3.4 Defect Rate

3.4 defect per million lines of code

3.3.5 Bugs

Critical: system/ part of the system does not operate
Major: important but non critical functionality does not work
Minor: small bugs

3.4 Performance

3.4.1 Response time

Average – 10 milliseconds, Maximum – 100 milliseconds

3.4.2 Throughput

5000 transaction per second

3.4.3 Capacity

This release of HSPM system may support up to 100 simultaneous users.

3.4.4 Degradation mode

There is no degradation mode.

3.4.5 Resource utilization

Tbs

3.5 Maintainability

Current plan is to release monthly update with bug fixes and minor enhancement, and quarterly update with enhancement with new features.

3.5.1 Backing up data

It is recommended to backup database at least twice in a week. E.g.: Every Tuesday and Friday.

3.6 Design Constraints

3.6.1 Architectural Requirement

The following requests need to be taken into account when considering the architecture of HSPM system:

- The system will be modular
- The system will be simple
- New module can be added with less effort in future

3.6.2 Software Languages

HSPM software will be written in python. For charts, it will use Chart Director.

3.7 On-line User Documentation and Help System Requirements

As with any good application, documentation and help facilities will exist for HSPM. The following documents will be made available to users:

- HSPM Quick Guide
- HSPM Architecture Guide
- HSPM UI User guide
- HSPM User Guide
- HSPM Administrator Guide
- HSPM ErrorCodes
- Separate training session **will not** be arranged

All documentaion will be provided in English, Japanese, Chienese, German and French.

3.8 Purchased Components

“HSPM” is an open-source tool and as such will use absolutely no purchased components. Everything that HSPM will need is already available in an OSS format.

3.9 Interfaces

3.9.1 User Interfaces

Web based interface. Details of prototype interfaces will be specified later.

3.9.2 Hardware Interfaces

None

3.9.3 Software Interfaces

Tbs

3.9.4 Communications Interfaces

Tbd

3.10 Licensing Requirements

“HSPM” will be licensed under the GPL.

All of HSPM's documentation will be licensed under the Creative Commons Attribution-NonCommercial-ShareAlike License (<http://creativecommons.org/licenses/by-nc-sa/2.0/>).

3.11 Legal, Copyright, and Other Notices

HSPM is a trademark of Hakuna Software Ltd.

All financial dealings will be done in USD.

3.12 Applicable Standards

4 Supporting Information

None at the moment