SOFTWARE REQUIREMENTS SPECIFICATION

for

Generic Web Portal (SaaS)

Version 1.0

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August 26, 2018

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Revision History

Date	Revision	Reason For Changes	Author
	1.0	Initial Version	Gahan Saraiya

1 Introduction

1.1 Purpose

This project targets the generic implementation of web portal so that any user can deploy their client-server architecture. The project is capable of deploying any e-commerce/management system with just following few simple steps in wizard.

1.2 Project Scope

This Generic Web Portal is a "Software as a service" for user or a company who wants to launch their e-commerce site or a management portal for item/product sales, purchase, accounting etc. This generic service helps stakeholders to launch it in just few steps such as some required information, policy agreement and payment to launch the desire service platform of their own.

Here to make the system generic all the products are treated like object as if in book store books are considered as objects having their properties unique (ISBN) and non-unique(Author, Title, Publisher, etc). similarly if it is for hotel management system rooms are treated as an object having their unique properties like room number or assigned id and non-unique properties such as availability, facility, floor, etc. Hence just by interpreting each product of real world as an object and treating it's use as a transaction. Also the system is meant to follow disciplined agile delivery such that it will be compatible to adapt new requirements and/or changes with the help of support option such that a company or user can deploy a new system of their own instead of using generic platform.

1.3 Definitions, acronyms, and abbreviations

Definitions, acronyms, and abbreviations	
Acronym	Meaning
SRS	Software Requirements Specification
SaaS	Software as a Service
PaaS	Platform as a Service
Stakeholder	Refers to a client or company
OWASP	Open Web Application Security Project
API	Application Programming Interface

2 Overall Description

2.1 Product Perspective
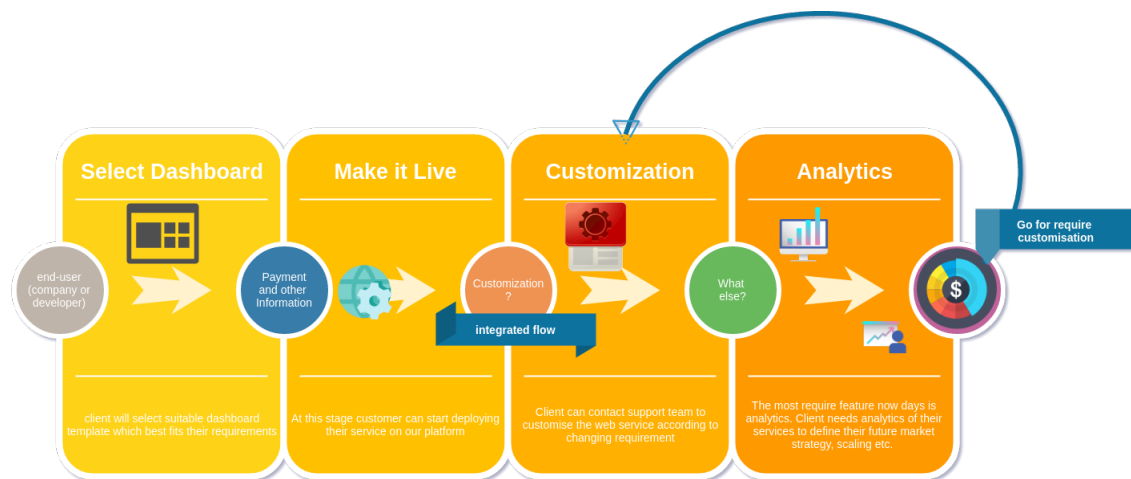
The diagram below shows the perspective of a system.

Figure 2.1: Product Perspective

When a user visits the platform on web, the task for user is to just decide their requirement and choose suitable management portal and it will be deployed by just following simple steps includes information fill up and payment service and user verification

2.2 Product Features

1. Easy to deploy web service on SaaS

2. Isolation for different user

3. Generic Web Platform to deploy various kind of web service i.e. accounting, inventory management, hotel management, hospital management or any kind of product or utility management system

4. To be known and marketed as PaaS and SaaS

5. System is scalable up to simple accounting management to e-commerce platform

6. Dashboard for analytics and database management

7. Various set of permission management

8. follows guideline of OWASP guidelines

9. Easy to consume APIs

2.3 User Classes and Characteristics

There are three kind of users utilizing the system:

Developer   Developer can be individual or part of a team or company accessing the system to deploy their web service

End User   end users access the system to interact with already deployed web service by Developer

2.4 Operating Environment

The Platform is deployed on centralized server hence any user having a web browser and active Internet connection can interact with this portal.

2.5 Design and Implementation Constraints

- However user can interact with any web browser which is constrained by hardware capability and operating system. Hence It is require to have enough free memory and storage space for web browser on the device.

- Also it is recommended that user should use latest available web browser.

- Depending on web browser type and version user interface and interaction ease may slightly vary.

- Performance of page load are also depended upon user's bandwidth too and user needs to have a stable Internet connection with good speed

2.6 User Documentation

- API documentation for developer

- online help and support for deployment

- video tutorial to show a demo of deployment

Rest of related document for end-user needs to be prepared by the web service owner/developer team whoever deployed the web service.

2.7 Assumptions and Dependencies

The Platform has only term agreement with the owner of web service. As the end-user (if any) will be consuming services provided by respective web service owner and for any help and support related to web service user needs to follow contact to support team of respective web service. i.e. if a end-user is accessing hotel management service deployed by a company XYZ and has any query or issue related to the system then this end-user needs to contact support staff of company XYZ only.

User may need to allow executing javascripts and image to experience the system else the page may not work as expected or may not work at all. The end-user might have to allow additional access to the camera or flash plugin or any other plugin or add on if it is require by web service owner.

3 External Interface Requirements

3.1 User Interfaces

- Admin Panel

- Dashboard

- User view

- Critical Section (to modify database of their system)

3.2 Software Interfaces

- Database: SQL Server

- HTTP connection: Apache 2 (to serve request)

- root access: SSH shell

- version control: git

- Technology: Python3, Django Framework, HTML, CSS, js

3.3 Communications Interfaces

- Require Internet Connection

- client-server communication established over HTTP

4 System Features

4.1 Functional Requirements

4.1.1 Administrator's Requirement

REQ 1: Login
To login into system valid email address and strong password is required

REQ 2: Sign Up
Administrator can register to deploy the web service which require below basic information:

⇒ Valid Email address

⇒ Strong Password

⇒ Name

⇒ Mobile Number

⇒ Select service plan

⇒ Mailing address

⇒ payment

Upon successful registration record will be stored in database and email verification link will be sent to register email address.

REQ 3: Profile Management
Administrators can update their profile information anytime
All fields except email address are updatable
Changes will be reflected in database when Administrator updates the information
Administratorcan also add other optional field information such as alternate address, contact number, profile image

REQ 4: Customize Database/service dashboard
Administrator can follow documentation to add/change existing database fields or tables

REQ 5: Credential Recovery
If Administrator is not remembering password for accessing system a password reset email will be send if require

REQ 6: Search and Manage record
Administrator can search any record for products, user and log and retrieve the detail

REQ 7: Create Staff user
At organization level there might be one or more people assigned the different task to manage and for that purpose sharing the ownership credential is risky as well as hard to track activity of each staff hence Administrator can create Staff user and assign them different accessible permission to the dashboard

REQ 8: Activity Log
All the sensitive dashboard activity logged

REQ 9: Report Generation
Administrator can generate report, balance-sheet in json or pdf format for record(s)

REQ 10: Invoice Generation
For any sale record Taxable Invoice can be generated in pdf format

REQ 11: Support and Maintenance
For any trouble or inquiry Administrator can contact support team

4.1.2 End User's Requirement

REQ 1: Login
To login into system valid email address and strong password is required

REQ 2: Sign Up
End User can register to deploy the web service which require below basic information:

  ⇒ Valid Email address

  ⇒ Strong Password

  ⇒ Name

  ⇒ Mobile Number

  ⇒ Select service plan

  ⇒ Mailing address

  ⇒ payment

Upon successful registration record will be stored in database and email verification link will be sent to register email address.

REQ 3: Profile Management
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REQ 4: Customize Database/service dashboard
End User can follow documentation to add/change existing database fields or tables

REQ 5: Credential Recovery
If End User is not remembering password for accessing system a password reset email will be sent on demand

REQ 6: conditional Search
End User can able to search offered product or order history

REQ 7: Support
If End User faces any problem or query then End User needs to contact web service Administrator or their support staff

5 Other Nonfunctional Requirements

5.1 Performance Requirements

REQ 1: Platform level (affecting Platform Administrator)
Server or cloud service used by platform must be highly scalable as it is depended upon number of web service deployed and their web traffic.

REQ 2: Web Service Owner (Administrator)
Web Administrator needs to intimate higher authority Platform Administrator for expected high traffic due to upcoming promotional offer to avoid possible service disruption due to performance

REQ 3: End User level
- ⇒ Internet Connection
- ⇒ Web Browser

5.2 Security Requirements

REQ 1: Privacy
users can only access data which belongs to them or permitted

REQ 2: Authorization
All page and URL must be available for only the user who has rights and permission to access it

REQ 3: Authentication
unauthenticated users are not allowed to perform any transactional activity recovery option should use captcha for human verification before sending password reset link

REQ 4: platform should follow all OWASP guidelines

5.3 Software Quality Attributes

<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability,

reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>

5.4 Business Rules

<List any operating principles about the product, such as which individuals or roles can perform which functions under specific circumstances. These are not functional requirements in themselves, but they may imply certain functional requirements to enforce the rules.>

6 Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

6.1 Appendix A: Glossary

6.2 Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>

6.3 Appendix C: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>