



## **BUSINESS REQUIREMENT DOCUMENT**

(Confidential Document)

To,

**STEPHEN**

St Joseph Printers

Prepared & submitted by :-



### **Infom Atomicka (Tech) Pvt. Ltd**

(An ISO 9001:2008 & 27001:2013 Certified Company)

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**"WE BRING YOUR CONCEPTS TO LIFE"**



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- ❖ Standard Interaction with clients for application's logical decision making
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- **Devi G Sha**  
 Founder & MD  
 Infom Atomicka (Tech) Pvt. Ltd



## Document Information and Approvals

### Revision History

Version #	Date	Responsibility (Author)	Description
1.0	04.06.2016	K.Balachandar	Requested change in website content and styles

### Document Approval

<u>Approver Name</u>	<u>Project Role</u>	<u>Signature/Electronic Approval</u>	<u>Date</u>
Mr. Stephen	Product Manager		
Mrs. Devi Sha	CTO		
Mr. Vinoth	Project manager		



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## 1. DOCUMENT PURPOSE

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The purpose of this document is to give a detailed description of the requirements for the “Print Stork” website. It will illustrate the purpose and complete declaration for the development of it. It will also explain system constraints, interface and interactions with other external interfaces. This document is primarily intended to be proposed to a customer for its approval and a reference for developing the website for the development team.

## 2. DOCUMENT RESOURCES

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Name	Business Unit	Role
Mr. Stephen	Product Manager	Client, Subject Matter Expert
Mr. Vinoth	Project manager	Project manager
Mr. K.Balachandar	Business System Analyst	Business Analyst



### 3. GLOSSARY OF TERMS

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Term/Acronym	Definition
End User	Someone who interacts with web portal
Admin/Administrator	System administrator who is given specific permission for managing and controlling the portal
Stakeholder	Any person who has interaction with the system who is not a developer.
DESC	Description
RAT	Rational
CONST	Constraints
PROTO	Prototype
DEP	Dependency
TAG	A unique, persistent identifier contained in a PLanguage statement [2]
GIST	A short, simple description of the concept contained in a PLanguage statement [2]
SCALE	The scale of measure used by the requirement contained in a PLanguage statement [2]
METER	The process or device used to establish location on a SCALE contained in a PLanguage statement [2]
MUST	The minimum level required to avoid failure contained in a PLanguage statement [2]
PLAN	The level at which good success can be claimed contained in a PLanguage statement [2]
WISH	A desirable level of achievement that may not be attainable through available means contained in a PLanguage statement [2]
DEFINED	The official definition of a term contained in a PLanguage statement [2]



## 4. PROJECT OVERVIEW

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### 4.1 Project Overview and Background

The primary function of a website is to perform online services such as Printing, Binding, Cabin Booking and Printing View to the End-users. The website functions that potentially could increase the utility of a web site are:

- Customer Dashboard
- Latest offers
- Online printing services
- Online payment
- Order Tracking

### 4.2 In Scope

The “PRINT STORK” website to promote their services in details and offers using few modules such as

- Identify end user as student of Professional
- To make the end user to select their area
- Customer Login
- Services
  - Printing
  - Binding
  - Business Cards
  - Brochure
  - Customized product printing
  - Cabin Booking
- Add to Cart
- Online Payment
- Account
  - My Order History
  - My Order Files
  - Pending Orders
  - Shipping Details
  - My Template
  - My Offer
- Contact

The home page is the first page that users see. The home page captures the attention of users, including attractive college banners, dynamic in Offer Zone, list of Services offered and contact details.

The home page from Print Stork design has several hypertext links, with the following purposes:

- “Printing” is one of the service, where the users can use online printing service by specify the printing details with supportive documents, perform online payment and track their Orders.



The Administrator panel of Print Stork helps to manage the content of client panel such as

- Manage Offer Zone.
- Manage College, School, State, Area, Paper size, Paper type list under printing.
- Manages registered user details.
- Manage ordered details.
- Manage Order Tracking.

#### 4.3 Out of Scope

The list of feature and services list below will be considered as out of scope

- Binding.
- Brochure.
- Cabin booking.
- Customized Product printing.

#### 4.4 Stakeholders

The following comprises the internal and external stakeholders whose requirements are represented by this document:

	Stakeholders
1.	Mr. Stephen
2.	Mrs. Devi Sha
3.	Mr. Vinoth
4.	Mr. K.Balachandar
5.	Mr. Sampathkumar





## 5. KEY ASSUMPTIONS AND CONSTRAINTS

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### 5.1 Key Assumptions and Constraints

#	Assumptions
1	One assumption about the website is that it will always be used on desktop browsers that have enough performance.
#	Constraints
1	Only after selecting end user location, the home page should get displayed



## 6. SPECIFICATION REQUIREMENTS

**6.1 External interface Requirements:** This section provides a detailed description of all inputs into and outputs from the website. It also gives a description of the hardware, software and communication interfaces and provides basic prototypes of the user interface.

**6.1.1 User interfaces:** The user of the website should see a home page maintains banners, list of available menus with short description towards selected menu, news and events. The banner attached with menus should be fixed to all the menus.

Fig: 1

Fig: 2



Browser

http://onlineprinting.com

Track your Order

Step1 Step2 Step3 Step4

☒ Black & White
 ☐ Color
 ☐ Black & White and Color

☒ Single side
 ☐ Double Side

Paper Size: A4

Paper Type: Bond Sheet

Total No of Pages: 554

Total Cost: 800

Upload your File: File Name

Fig: 3

Browser

http://onlineprinting.com

Track your Order

Step1 Step2 Step3 Step4

☐ Black & White
 ☐ Color
 ☒ Black & White and Color

☒ Single side
 ☐ Double Side

Paper Size: A4

Paper Type: Bond Sheet

Enter Color print page no. 1, 3, 5   E.G: 1, 5, 345

Total No of Color Pages: 3

Total No of Pages: 554

Total Cost: 800

Upload your File: File Name

Fig: 4



Browser

http://onlineprinting.com

Track your Order

Step1 Step2 Step3 Step4

### Shipping Details

☒ Send Order to registered address

Line1

Line2

Area

State

**Send Order to my College**

Student Name

Student ID

Year of Studing

Department

Select College

Select Area

Next Reset

Fig: 5

Browser

http://onlineprinting.com

Track your Order

Step1 Step2 Step3 Step4

### Confirmation

**Order Details**

Print Type : Black & White and Color

Print Side : Single

Paper Size : A4

Paper Type : Bond Sheet

Enter Color print page no. : 1, 3, 5,

Total No of Color Pages : 3

Total No of Pages : 554

Total Cost : 800

Upload File Name : Requirement.docx, printing.jpeg

**Shipping Details**

Line1 : #10 Y-block

Line2 : Government quarters

Pay now Cancel

Fig: 6

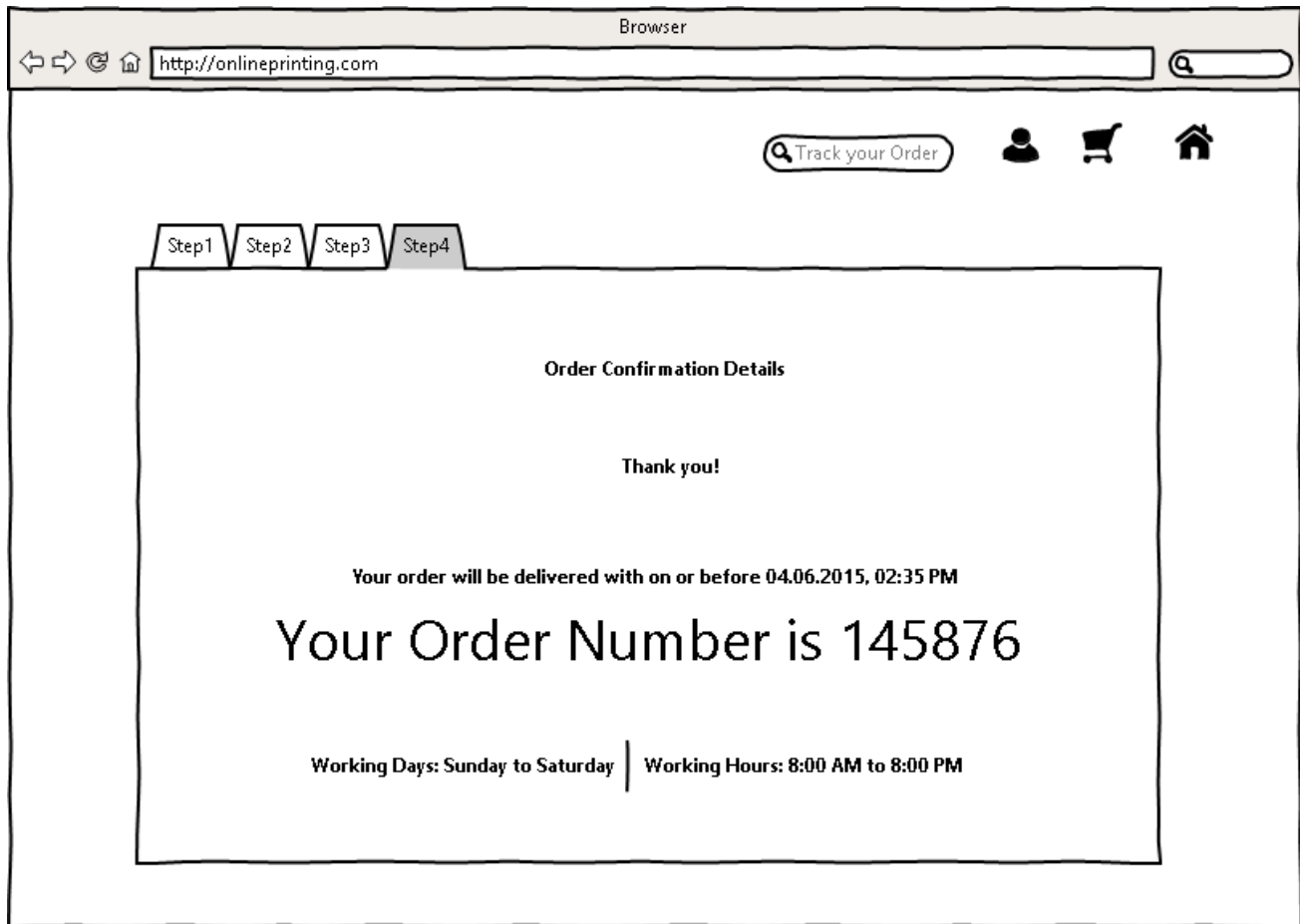


Fig: 7

**6.1.2 Hardware interfaces:** Since the website have any designated hardware; it does not have any direct hardware interfaces. The web portal is managed by the internet device in the end user's terminal (Computers) and the hardware connection to the database server is managed by the underlying operating system on the computer and the web server.

**6.1.3 Software interfaces:** The website communicates web server through web browser in order to get information about menus and the visual representation of it, and with the database in order to get the information about the "Print Stork", see Figure 1. The communication between the database and the website consists of operation concerning both reading and modifying the data, while the communication between the database and the website consists of only reading operations.



## 7. FUNCTIONAL REQUIREMENTS

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This section includes the requirements that specify all the fundamental actions of the web portal.

### 7.1 User Class 1 - The End User

#### 7.1.1 Functional requirement 7.1

**ID:** FR1

**TITLE:** Account

**DESC:** Given that a user has opened the URL provided, then the user should be able to view the Account menu. When the user selects Account menu, the system should provide an option for new registration or login. The user should be able to perform either new registration or login.

**RAT:** In order for a user to Access Account.

**PROTO:**

#### 7.1.2 Functional requirement 7.2

**ID:** FR2

**TITLE:** Login

**DESC:** Given that a user has opened the Login page, then the user should be able to login successfully using fields such as enter user name and password or by using social media such as Face book and Google account. Once the user successfully logged in, the user should be able to view registered user name and should be able to perform the corresponding activities for which the login is requested.

**RAT:** In order for a user to log in.

**DEP:** FR1, FR3

**PROTO:**

#### 7.1.3 Functional requirement 7.3

**ID:** FR3

**TITLE:** User registration

**DESC:** Given that a user has opened the Registration page, Then the user should be able to perform new registration using fields such as First name, Last Name, E-mail id, phone no, password, confirm password and Captcha or by using social medial links such as Face book and Google. Once the user successfully registered, the user should be able to access the portal as a registered user and user information should be stored in the database as a registered user.

**RAT:** In order for a user to perform new registration.

**DEP:** FR1

**PROTO:**



#### **7.1.4 Functional requirement 7.4**

**ID: FR4**

**TITLE:** User segregation

**DESC:** Given that a user has opened the URL provided, the user should be able to select either Student or Professional. If the user selects student, then he should be able to select the college and area. If the user selects professional, should be able to select the city and area. Once the user successfully completed user segregation page, on click go button, the user should have redirected to home page.

**CONST:**

- If the user selects Student, The Area should get affected based on college.
- If the user selects Professional, The Area should get affected based on state.

**RAT:** In order for a user to select student or professional.

**PROTO:** fig1 , fig2

#### **7.1.5 Functional requirement 7.5**

**ID: FR5**

**TITLE:** Printing

**DESC:** Given that a user has opened the Home page, then the user should be able to select Printing feature. The user selects printing, the user should be able to view Printing page properties with respect to printing types such black and white, color and black and white with color. The user should be able to select either one of the printing type and complete the printing properties page. Once the user successfully completed printing properties page, the user should be get redirected to shipment details.

**CONST:**

- Black & White printing properties such as single or double side, paper size, paper type, total no of pages, total costs, and file upload
- Color printing properties such as single or double side, paper size, paper type, total no of pages, total costs, and file upload
- Color and Black & White printing properties such as single or double side, paper size, paper type, Color pages' number with file name, No. of Color pages, total no of pages, total costs, and file upload
- User should be able to upload completed MS office files format and N number of files.
- User should be able to specify the color pages' number with respect to file name (uploaded by end user).

**DEP:** FR4

**RAT:** In order for a user to access Printing.

**PROTO:** fig3



### **7.1.6 Functional requirement 7.6**

**ID: FR6**

**TITLE:** Total cost Calculation.

**DESC:** Given that a user in printing properties page, the total cost should be get displayed based on the cost specified by administrator for respective combination, after filling printing page properties fields.

**DEP:** FR4, FR5

**RAT:** In order for a system to calculate the total cost.

**PROTO:** fig3

### **7.1.7 Functional requirement 7.7**

**ID: FR7**

**TITLE:** Shipment details.

**DESC:** Given that a user in shipment details, the user should be able to provide their shipping details using fields such as Line1, Line2, Area, State and Phone Number. There should be an option to ship order to college using the details such as Student name, Student ID, Year of Studying, Department, College and Area.

**CONST:**

- Only after the providing the shipping details, the user should be able to proceed.
- If the user not yet logged in, there should be an option to move to order confirmation page using guest user, new registration or Login.
- There should be an option to move from shipping details to printing properties page.

**DEP:** FR4, FR5, FR6

**RAT:** In order for a user to enter their contact details.

**PROTO:** fig5

### **7.1.8 Functional requirement 7.8**

**ID: FR8**

**TITLE:** Order Confirmation

**DESC:** Given that a user in order confirmation page, the user should be able to view ordered details such as printing properties details and shipment details. The user should be able to add to cart, confirm or cancel the order.

**CONST:**

- There should be an option to move from Order confirmation to shipment page.

**DEP:** FR7

**RAT:** In order for a user to get confirmation of the order and confirmation message.

**PROTO:** fig6

### **7.1.9 Functional requirement 7.9**

**ID: FR9**

**TITLE:** Cart

**DESC:** Given that a user has opened the Cart, the user should be able to view the available orders in cart. There should be option to check out all the orders from cart.

**CONST:**

- By default, the count of orders should get displayed on Cart icon.

**DEP:** FR8

**RAT:** In order for a user to know cart details.





### **7.1.8 Functional requirement 7.8**

**ID: FR8**

**TITLE:** Online Payment

**DESC:** Given that a user in online payment, the user should be able to make a payment using CC Avenue. The user should be able to view unique order number, after successful completion of online payment.

**CONST:**

- The user should receive confirmation mail about successful order with order details and tracking number.
- There is no other payment method.

**DEP:** FR8

**RAT:** In order for a user to make online payment.

### **7.1.9 Functional requirement 7.9**

**ID: FR9**

**TITLE:** Order tracking

**DESC:** Given that a user in order tracking page, the user should be able to track order using order number. The tracking result should be get displayed fewer than four categories such as Order Confirmed, completed, shipped and delivered.

**CONST:**

- The tracking result should be updated by administrator
- By default, the tracking result will be get displayed as Order Confirmed.
- The user should be able to track only one order at a time.

**DEP:** FR8

**RAT:** In order for a user to track the order.

**PROTO:**

## **7.2 User Class 2 - Administrator**

### **7.2.1 Functional requirement 2.1**

**ID: FR10**

**Feature: Administrator log in**

In order to administrate the system an administrator should be logged in to the web-portal.

#### **Scenario: Successful log-in**

Given the administrator in log in page, then the administrator should be able to login using username and password.

### **7.2.2 Functional requirement 2.2**

**ID: FR11**

**Feature: College master**

In order to allow college master to use in the system an administrator should be able to create college master.

#### **Scenario: create college**

Given the administrator is logged in then the administrator should be able to create college using option. The option is to enter the college names.

**Scenario: edit college**

Given the administrator is logged, and there should be an option to edit the colleges available. Then the admin should be able to save edited details. User should be able to Active or in-Active created college.

**Scenario: delete college**

Given the administrator is logged, and there should be an option to delete the existing college. The admin should be able to delete individual or group of colleges.

**7.2.3 Functional requirement 2.3****ID: FR12****Feature: Area**

In order to allow area to use in the system an administrator should be able to create area with respective details.

**Scenario: Add new area**

Given the administrator is logged-in, and then the administrator should be able to create new area using option. The option is to enter the area name.

**Scenario: Edit area**

Given the administrator is logged-in, and there should be an option to edit existing area details such as area name and there should be an option to save the updated details. User should be able to Active or in-Active created area.

**Scenario: Delete area**

Given the administrator is logged-in and there should be an option to delete existing area so that complete area details such as area name should be get deleted from Database.

**7.2.4 Functional requirement 2.4****ID: FR13****Feature: State**

In order to allow area to use in the system an administrator should be able to create state with respective details.

**Scenario: Add new state**

Given the administrator is logged in then the administrator should be able to create new state using option. The option is to enter the state name.

**Scenario: Edit state**

Given the administrator is logged, and there should be an option to edit existing state details such as state name. User should be able to Active or in-Active Created State.

**Scenario: Delete state**

Given the administrator is logged, and there should be an option to delete existing state so that the state details such as state name should be get deleted from Database.



### **7.2.5 Functional requirement 2.5**

**ID: FR14**

**Feature: Paper size**

In order to allow Paper size to use in the system, an administrator should be able to create Paper size with available paper sizes.

**Scenario: Add paper size**

Given the administrator is logged in then the administrator should be able to add new Paper size using option. The option is to enter the paper size. E.G: A4 and legal sizes.

**Scenario: Edit paper size**

Given the administrator is logged in then the administrator should be able to edit existing paper size. There should an option to change paper size by selecting respective paper size. User should be able to Active or in-Active created paper size.

**Scenario: Delete Paper size**

Given the administrator is logged in then the administrator should be able to delete existing paper size so that respective paper size should be removed from the Database.

### **7.2.6 Functional requirement 2.6**

**ID: FR15**

**Feature: Paper type**

In order to allow Paper type to use in the system an administrator should be able to create Paper type with available paper types.

**Scenario: Add paper type**

Given the administrator is logged in then the administrator should be able to add new Paper type using option. The option is to enter the paper type. E.G: Plain, bond papers, etc...

**Scenario: Edit paper type**

Given the administrator is logged in then the administrator should be able to edit existing paper type. There should an option to change paper type by selecting respective paper type. User should be able to Active or in-Active created paper size.

**Scenario: Delete Paper type**

Given the administrator is logged in then the administrator should be able to delete existing paper type so that respective paper type should be removed from the Database.

### **7.2.6 Functional requirement 2.6**

**ID: FR16**

**Feature: User details**

In order to use user details in the system an administrator should be able to access User details.

**Scenario: view user details**

Given the administrator is logged in, and then the administrator should be able to view registered user details. The details are User ID, First name, last name, Email ID, D.O.B, Phone number, Social Media (Face book or Google) and Password.

**Scenario: Edit user details**

Given the administrator is logged in then the administrator should be able to edit existing user details. There should be able an option to Active or in-Active users.

**Scenario: Delete user details**

Given the administrator is logged in then the administrator should be able to delete existing user details so that respective user details should be removed from the Database.

**7.2.7Functional requirement 2.7****ID: FR17****Feature: ordered details**

In order to use ordered details in the system an administrator should be able to access ordered details.

**Scenario: view ordered details**

Given the administrator is logged in, and then the administrator should be able to view ordered (registered and guest user) details. The details are ordered ID, Bank Reference number, First name, last name, Email ID, D.O.B, Phone number, Comments, Shipment address, Ordered details, uploaded files, date of Ordered, Date of delivered.

**Scenario: Edit ordered details**

Given the administrator is logged in then the administrator should be able to edit existing ordered details. The user should be able to download the entire uploaded files. There should be able an option to Active or in-Active orders.

**Scenario: Delete ordered details**

Given the administrator is logged in then the administrator should be able to delete existing ordered details so that respective ordered details should be removed from the Database.

**7.2.8Functional requirement 2.8****ID: FR18****Feature: Offer zone**

In order to use offer zone in the system an administrator should be able to create offer zone.

**Scenario: Add offer zone**

Given the administrator is logged in then the administrator should be able to add offer zone for student and professional using options. The options are Offer title and Upload Offer Image.

**Scenario: Edit offer zone**

Given the administrator is logged in, and then the administrator should be able to edit existing offer zone details. There should be able an option to Active or in-Active users.

**Scenario: Delete offer zone**

Given the administrator is logged in then the administrator should be able to delete existing offer zone so that respective offer zone details should be removed from the Database.

**7.2.9 Functional requirement 2.9****ID: FR19****Feature: Track order**

In order to use track order in the system an administrator should be able to access track order.

**Scenario: Edit track the order**

Given the administrator is logged in then the administrator should be able to edit track order using options. The options are Customer ID, Order ID, Order ID, order status and date of deliver. There should be an option to update the ordered status. The status are processed, completed, shipped and delivered. The updated ordered status should get affected in respective user side. There should be an option to Active or In-Active order.

**Scenario: Delete track the order**

Given the administrator is logged in then the administrator should be able to delete track the order so that respective track the order details should be removed from the Database.

**7.2.10 Functional requirement 2.10****ID: FR20****Feature: Cost Estimation**

In order to use Cost Estimation in the system an administrator should be able to create cost estimation for printing combinations.

**Scenario: Add Cost Estimation**

Given the administrator is logged in then the administrator should be able to add cost for new combination using options for Color and Black and White. The options for Black and White are Pages Side, Paper size, Paper type and Total number of pages. The option for Color are Pages side, Paper size, Paper type, number of color pages and Total number of Pages.

**Scenario: Edit Cost Estimation**

Given the administrator is logged in, and then the administrator should be able to edit existing cost estimation. There should be able an option to Active or in-Active each and every cost estimated.

**Scenario: Delete Cost Estimation**

Given the administrator is logged in then the administrator should be able to delete existing cost estimation so that respective Cost estimation should be removed from the Database.

**7.2.11 Functional requirement 2.11****ID: FR21****Feature: Change Password**

In order to allow change password to use in the system an administrator should be able to change current password.



**Scenario: change password**

Given the administrator is logged in then the administrator should be able to change password using Input options. The Input options are Old Password, New Password and Current Password.

**7.2.12 Functional requirement 2.12**

**ID: FR22**

**Feature: Logout**

In order to Logout to use in the system an administrator should be able to logout from admin panel.

**Scenario: change password**

Given the administrator is logged in then the administrator should be able to logout from the admin panel.

## 8. NON FUNCTIONAL REQUIREMENTS

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This section includes the requirements that specify all the fundamental actions of the web portal.

### 8.1 Performance requirements

The requirements in this section provide a detailed specification of the user interaction with the software and measurements placed on the system performance.

#### 8.1.1 Prominent search feature

**ID: QR1**

TITLE: Usage of the result in the list view

DESC: The results displayed in the list view should be user friendly and easy to understand. Selecting an element in the result list should only take one click.

RAT: In order to for a user to use the list view easily.

DEP: none

#### 8.1.2 Usage of the information link

**ID: QR2**

TITLE: Usage of the information link

DESC: The information link should be prominent and it should be evident that it is a usable link. Selecting the information link should only take one click.

RAT: In order to for a user to use the information link easily.

DEP: none

#### 8.1.3 Response time

**ID: QR3**

TAG: Response Time

GIST: The fastness of the search

SCALE: The response time of a search

METER: Measurements obtained from 1000 searches during testing.

MUST: No more than 2 seconds 100% of the time.

WISH: No more than 1 second 100% of the time.



## 8.2 Software system attributes

The requirements in this section specify the required reliability, availability, security and maintainability of the software system.

### 8.2.1 Reliability

#### ID: QR4

TAG: System Reliability

GIST: The reliability of the system.

SCALE: The reliability that the system gives the right result on a search.

METER: Measurements obtained from 1000 searches during testing.

MUST: More than 98% of the searches.

PLAN: More than 99% of the searches.

WISH: 100% of the searches.

### 8.2.2 Availability

#### ID: QR5

TAG: System Availability

GIST: The availability of the system when it is used.

SCALE: The average system availability (not considering network failing).

METER: Measurements obtained from 1000 hours of usage during testing.

MUST: More than 98% of the time.

PLAN: More than 99% of the time.

WISH: 100% of the time.

#### ID: QR6

TITLE: Internet Connection

DESC: The website should be connected to the Internet.

RAT: In order for the website to communicate with the database.

DEP: none

### 8.2.3 Security

#### ID: QR7

TAG: Communication Security

GIST: Security of the communication between the system and server.

SCALE: The messages should be encrypted for log-in communications, so others cannot get user-name and password from those messages.

METER: Attempts to get user-name and password through obtained messages on 1000 log-in session during testing.

MUST: 100% of the Communication Messages in the communication of a log-in session should be encrypted.

Communication Messages: Defined: Every exchanged of information between client and server.

**ID: QR8**

TAG: Admin Login Account Security

GIST: Security of accounts.

SCALE: If an admin tries to log in to the web portal with a non-existing account, then the admin should not be logged in. The admin should be notified about log-in failure.

METER: 1000 attempts to log-in with a non-existing user account during testing.

MUST: 100% of the time.

**ID: QR9**

TAG: Admin Account Security

GIST: Security of admin accounts.

SCALE: An admin and IP address should not be able to log-in to the web portal for a certain time period after three times of failed log-in attempts.

METER: 1000 attempts to log-in during the lock period after the user account has been locked because of failed log-in attempts of three times.

MUST: The locking period should be half an hour, and during that period the log-in function is disabled.

**ID: QR10**

TAG: User Create Account Security

GIST: The security of creating account for users of the system.

SCALE: If a user wants to create an account and the desired user name is occupied, the user should be asked to choose a different user name.

METER: Measurements obtained on 1000 hours of usage during testing.

MUST: 100% of the time.

**8.2.4 Maintainability****ID: QR11**

TITLE: portal extendibility

DESC: The portal should be easy to extend. The code should be written in a way that it favors implementation of new functions.

RAT: In order for future functions to be implemented easily to the portal.

DEP: none

**ID: QR12**

TITLE: Application testability

DESC: Test environments should be built for the portal to allow testing of the different functions.

RAT: In order to test the portal.

DEP: none

**8.2.5 Portability****ID: QR13**

TITLE: Application portability

DESC: The portal should be portable with latest version of Chrome and Firefox.

RAT: The adaptable platform for the portal to run on.

DEP: none





## 9. APPENDIXES

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### 9.1 Appendix