System Requirements Specification

RoboNews.com
"Your Source For Robotics Coverage"

Client

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Team 3

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RoboNews.com
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1. Introduction

1.1 Purpose of This Document

The purpose of this document is to establish and explain specifications of what is desired from the 'RoboNews' application. This document will outline the functional and nonfunctional requirements of the application from the perspectives of both user and system, including use cases that describe the interaction between the user and system.

1.2 References

1.   'RoboNews' UI Design Document

1.3 Purpose of the Product

The 'RoboNews' application is designed to address the need for an ability to track the state of the art in robotics. The application will compile robotics articles and display them to the user in a certain organized fashion that offers relevant results and extensive coverage of the specific user-desired robotics topic. The application will act as a thorough central source and smart presentation tool of robotics news.
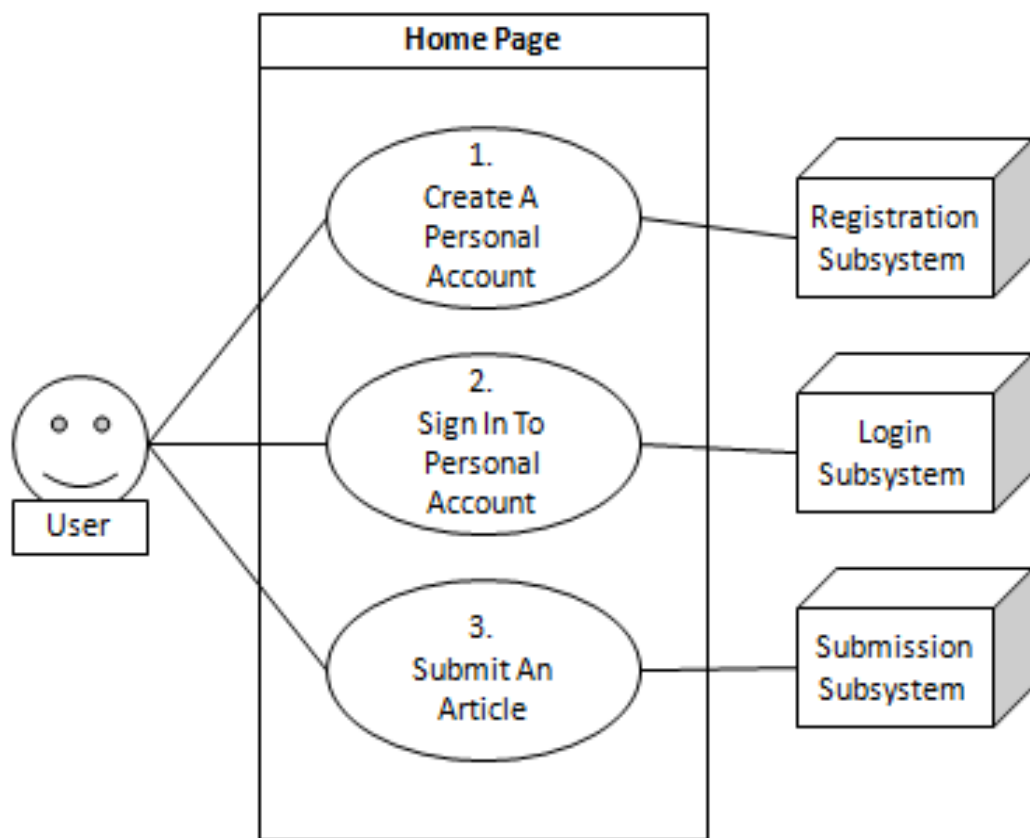
1.4 Product Scope

The following summarizes some, but not all of the currently relevant use cases involved. At this point in development, this is list in not currently extensive:

- The application allows users to create their own personal account.
- The application allows users to sign in to their personal account in order to gain submission privileges.
- The application allows users to submit an article.

Please refer to Figure 1 below for a top-level use case and context diagram. Figure 1 shows how the user interacts with the system to achieve the above mentioned relevant use cases.

Figure 1:

Top-Level Use Case & Context
Diagram

2. Functional Requirements

This section describes the functions that the system provides.
For a top-level overview of the use cases, see Figure 1.

2.1 Use Case # 1

Number	1	
Name	Create A Personal Account	
Summary	A user creates a personal account	
Priority	5	
Preconditions	The user has ready a username, password, and email address	
Postconditions	The system registers a personal account with the user's submitted information, and notifies of success.	
Primary Actor	User	
Secondary Actors	Registration Subsystem	
Trigger	The user has opened the account creation page	
Main Scenario	Step	Action
	1	The user opens the account creation page
	2	The user enters their information into the appropriate fields
	3	The user clicks the registration button
	4	The system registers a personal account for the

		user, notifying of success.
Extensions	Step	Branching Action
	4a	The system rejects the submission due to an error, notifying of failure. This includes an empty field or invalid information
Open Issues	1	What constitutes a submission error in step 4a? Does the system check for redundant information across users?

2.2 Use Case # 2

Number	2	
Name	Sign In To Personal Account	
Summary	A user signs into their personal account	
Priority	5	
Preconditions	The user has ready their username and password	
Postconditions	The user is logged into the system and the appropriate page variables are set. A user can now submit an article.	
Primary Actor	User	
Secondary Actors	Login Subsystem	
Trigger	The user has opened the login page	
Main Scenario	Step	Action

	1	The user opens the login page
	2	The user enters username and password into the appropriate fields
	3	The user clicks the login button
	4	The system logs the user in, setting the appropriate page variables, and allowing submissions.
Extensions	Step	Branching Action
	4a	The system rejects the user login due to an error. This includes an empty field or invalid login information
Open Issues		

2.3 Use Case # 3

Number	3	
Name	Submit An Article	
Summary	A user submits an article to the system.	
Priority	5	
Preconditions	The user is logged in and has ready a title, URL, tag(s), and rating.	
Postconditions	The system creates and stores a submission entry with the given information, and notifies of success.	
Primary Actor	User	

Secondary Actors	Submission Subsystem	
Trigger	The user has opened the submission page.	
Main Scenario	Step	Action
	1	The user opens the submission page
	2	The user enters into the appropriate fields a title, URL, tag(s), and rating.
	3	The user clicks the submission button.
	4	The system creates a submission entry with the given information and stores it onto the database, notifying of success.
Extensions	Step	Branching Action
	4a	The system rejects the submission due to an error, notifying of failure. This includes an empty field or an invalid entry.
Open Issues	1	What constitutes an invalid entry? Does the system check for redundant submissions or invalid URL's?

Use Case Tests

2.1.1 Use Case Test # 1
Create A Personal Account

Open the account creation page, enter a username and password, and click the registration button. Verify that the account was created by checking for the appropriate notification, and by attempting a login with the same information.

Leave one or multiple fields blank on the account creation page and click the registration button. Verify that the account was not created by checking for the appropriate notification, and by analyzing the database.

2.2.1 Use Case Test # 2
Sign In To Personal Account

Open the login page, enter a username and password, and click the login button. Verify that you are now logged in to the system by checking for the appropriate indicator. Also check that you can now submit an article.

Leave one or multiple fields blank on the login page and click the login button. Verify that you are not logged in by checking for the appropriate indicator. Also check that you cannot submit an article.

2.3.1 Use Case Test # 3
Submit An Article

Open the article submission page, enter the appropriate information into the fields, and click the submission button. Verify that the submission was accepted by checking for the appropriate notification and by analyzing the database.

Leave one or multiple fields blank on the submission page and click the submission button. Verify that the submission was rejected by checking for the appropriate notification.

3. Nonfunctional Requirements

This section describes the constraints on the development of the system and the system itself.

Number	Priority	Description
1	5	The database is secure and not directly accessible by non-admin users.

2	4	The system will organize and present entries in a functional manner. Organization will benefit the user.
3	3	The system will be easily navigated by the user. Layout will be intuitive.
4	2	HTML and Javascript will be used to create the User Interface.
5	2	PHP will be used to process the back end.
6	2	SQL will be used to communicate with the database.

4. User Interface

Refer to the User Interface Design Document for detailed information about the 'RoboNews' user interface.

5. Deliverables

The following will be delivered to the customer:

Hard copies of each of the following:

- Systems Requirement Specification
- System Design Document
- User Interface Design Document
- User Manual
- Administrator Manual
- Copies of all bi-weekly Status Reports

A portable drive (or electronic copy in a ZIP file) containing the following:

- Systems Requirement Specification

- System Design Document
- User Interface Design Document
- User Manual
- Administrator Manual
- All source code
- The executable program
- Any other software required for installation and execution of the delivered program.

6. Open Issues

Listed are currently open issues concerning the system's requirements.

Issue	Plan
What constitutes an error for the various page fields? This includes the login page, the account creation page, and the article submission page. What should the system check for outside of empty fields?	This will be discussed later when the team further refines the specifics of each subsystem.

Appendix A – Agreement Between Customer and Contractor

The customer agrees to a Robotics site that compiles relevant news and informational articles. Articles will be submitted by users of the site, though the team will research and attempt to include a web trawler if time permits. The site will also include search functionality through the use of tags (i.e. categories). Users of the site will also be able rate articles using an upvote/downvote system. The most popular articles and tags will be presented on the front page. The team will continue to implement these features in further development spirals.

Client
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Team
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Appendix B – Team Review Sign-off

All members of the team have reviewed this document and agree on its content and format. Any minor disagreements are to be listed in the comments section below.

Name (signature): _____
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Date: _____

Comments: _____

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Appendix C – Document Contributions

This document was mainly created by Austin Duff. All group members assisted in reviewing and editing the document.