FUNCTIONAL SPECIFICATION DOCUMENT TEMPLATE

SPACEX MICROSITE

DOCUMENT VERSION : 1.1

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AUTHORS

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DOCUMENT HISTORY

Date	Version	Document Revision Description	Document Author
07.05	1.0	The first version of the functional specification document	Jonas Thomassen
06.06	1.1	Improved use case diagram	Jonas Thomassen

APPROVALS

Approval Date	Approved Version	Approver Role	Approver
11.05.2018	1.0	Approver	Shabana Jamal

Table of Contents

1. Introduction

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of definitions is provided.

1.1   Purpose of the document

The purpose of this document is to give a detailed description of the requirements for the "SpaceFeed" requested software. It will show the purpose and the complete declaration for the system development. It will explain system constraints, interface and interactions with other external applications. This document is primarily intended to be used for reference for developing the first version of the system once the document has been approved.

1.2   Project Scope

"SpaceFeed" is a website developed in collaboration with SpaceX, aimed to raise awareness about space program activity around the world, for anyone interested we will provide links to more information on the subject, live feeds of launches, and have a calendar with planned take-offs and other events.

"SpaceFeed" is meant for people interested in space program activity and space technology, created and intended to make all dates and data organized and easily available for the people interested. some kind of schedule or timeline information with the planned events and launches is required and a way for users to contact the development team is recommended.

The users of the website should be able to sign up for a newsletter if they want, for notifications by email when events are about to start, when new events are added, or general news in the field.

1.4   Related documents

Component	Name (with link to the document)	Description
Gantt Chart		a chart that shows the project progression in certain periods of time
Project plan		document with due dates and milestones
Report		The final report of the project

1.5   Terms/Acronyms and Definitions

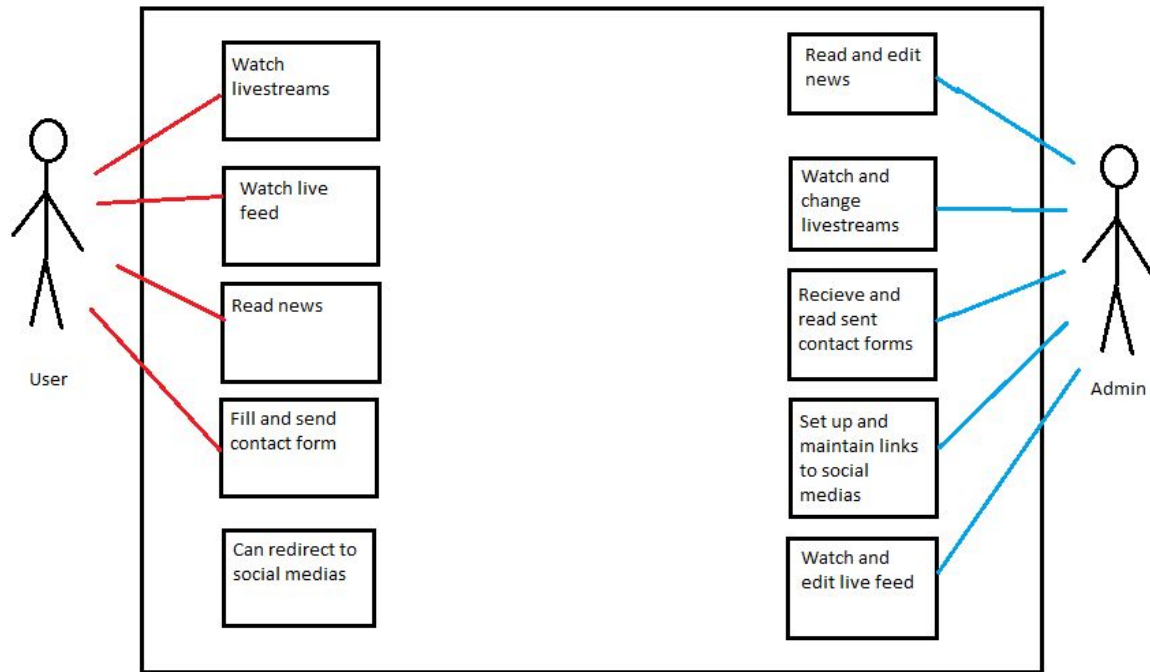| Term/Acronym	Definition
User	A person who interacts with the website
Administrator / Admin	System administrator from the company or spaceX who is given specific permission for managing and control on the website
Launch / take-off	The planned date / time for when a rocket or other technology is meant to be sent to space
ID	Unique identifier for the different functional requirements
DESC	Description of functional requirements
DEP	Dependencies of functional requirements

1.6   Risks and Assumptions

The website is constrained by the browsers. since the software is web based the users needs an internet connection and a browser to be able to gain access to our service. Browser support must be taken into account.

If a user is in an area with slow internet connection, it can cause problems with the loading of certain elements and cause the live feed to struggle, or even fail to load at all.

2.   System/ Solution Overview

This section provides description about the different user roles and what the different roles have access to, describe other software and systems the developed software will be dependent on, and graphical representations of the software.

2.1   Context Diagram/ Interface Diagram/ Data Flow Diagram, Application Screen Flow, Sitemap, Process Flow/Use case diagrams

Use Case Diagram

2.2   System Actors

2.2.1   User Roles and Responsibilities / Authority Requirements

User/Role	Frequency of Use	Security/Access, Features Used	Additional Notes
User	Occasional	Read-only	Able to interact with elements on the site
Administrator	Frequent	Read and Write privileges,	make changes to published news in case of typos and minor errors.

2.3 System Dependencies

2.3.1   System Dependencies(database example,google api)

Official NASA api - https://api.nasa.gov/index.html

Open Source SpaceX apis - https://github.com/r-spacex/SpaceX-API

Launch News and schedules - https://spaceflightnow.com/launch-schedule/

SpaceX News and Media site - http://www.spacex.com/media

SpaceX **Unofficial** Youtube Channel - https://www.youtube.com/user/spacexchannel

Nasa **Offical** Youtube Channel - https://www.youtube.com/channel/UCLA_DiR1FfKNvjuUpBHmyIQ

3. Functional Specifications

This section is to deliver a high-level description of the functional specifications related to the overall system, functional requirements and specifications of the field data elements.

3.1 <Title>

SpaceFeed

3.1.1 Purpose/ Description

This section provides a detailed description of all inputs into and outputs from the system. It also gives a description and specification of the different form elements used and their dependencies. A brief description of any requirements on page level details.

3.1.2 Functional Requirements

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

3.1.3 Field level specifications

Form Elements:

Field Label	UI Control	Mand?	Edit?	Data Type	Default Value	Data Example	Data Source
name	input	Yes	Yes	type="name"	Name	Jonas	Contact Form
email	input	Yes	Yes	type="email"	E-mail	space@email.com	Contact Form

| comment | textarea | Yes | Yes | textarea | Comment | "Hello" | Contact Form |

Form Business Rules and Dependencies:

Field Label	Validation / Business Rules	Error Messages	Data Dependencies	Additional Info/ Notes
name	Name field must be filled out	For empty name area display "Please enter your name"	email and comment	if name is not filled out, comment will not be sent to our support team
E-mail	Email field must be filled out and be a valid E-mail address.	For empty email area display "Please enter your email" For invalid email display "Please enter a valid email address"	name and comment	comment will not be sent to the support team if email in field is blank or invalid
comment	comment must be filled out	For empty comment area display "Comment **can not** be blank"	name and email	comment can not be sent without a comment

Functional requirement 3.2.1(User)

ID: FR1

Title: Access web based platform

DESC: A user must be able to gain access to the platform through the use of a web browser, given that they have an internet connection

DEP: None

Functional requirement 3.2.1.2

ID:FR2

TITLE: Sign up to newsletter

DESC: Users should be able to sign up for newsletters if they want, to receive news and notifications

DEP: FR1

Functional requirement 3.2.1.3

ID:FR3

TITLE: Notify newsletter members

DESC: Users signed up for newsletters must be notified when a news story is published, a news or launch stream went live, and other news on and about the platform.

DEP: FR1, FR2

Functional requirement 3.2.1.4

ID: FR4

TITLE: Web Platform - Watch / Redirection to live feed

DESC: Users must be able to watch live feeds on our platform, and be redirected to the original platforms if they wish to do so.

DEP: FR1

Functional requirement 3.2.1.5

ID: FR5

TITLE: Web Platform - Read News

DESC: A user must be able to read news articles published on our website with ease.

DEP: FR1

Functional requirement 3.2.1.6

ID:FR6

TITLE: Web Platform - Contact Support

DESC: A user must be able to contact a support board in case they stumble upon an error, other forms of bugs on our platform or if they require help and assistance in any way

DEP: None

Functional requirement 3.2.2.(Admin)

ID: FR1

Title: Access web based platform

DESC: An admin must be able to gain access to the platform through the use of a web browser, given that they have an internet connection

DEP: None

Functional requirement 3.2.2.2

ID:FR2

TITLE: Sign in

DESC: An admin must be able to sing in to the admin section of the webpage

DEP: None

Functional requirement 3.2.2.3

ID: FR3

TITLE: Control and edit news stories

DESC: An admin must be able to control and edit published news stories in case of typos or broken links

DEP: FR2

Functional requirement 3.2.2.4

ID: FR4

TITLE: Control live feeds

DESC: An admin must be able to check live feeds in case of broken hyperlinks or other errors wit the feed service

DEP: FR2

Functional requirement 3.2.2.5

ID: FR5

TITLE: Contact Devs

DESC: An admin must be able to get in touch with the development team quickly in case of broken live feeds or other errors the admin can not fix

DEP: FR2

Form Events and Dependencies:

Button, Link, Icon Label	OnClick Event	Other Event	Visible	Enabled Vs Disabled	Navigate To	Validation	Dependencies
Submit button	Validate user input	Submits the comment	Yes	Enabled		validate email address	name, email and comment field can not be blank email must be valid
Sign in button	Validate user input		Yes, on admin sign-in page	Enabled	Admin homepage	Validate username and password	valid username and password user exists in admin registry
Live Feed	Redirect		Yes, on nav	Enabled	live feeds		
News	Redirect		Yes, on nav	Enabled	news stories		
Home	Redirect		Yes, on nav	Enabled	Start page		
Contact	Redirect		Yes, on nav	Enabled	Contact page		
Admin	Redirect		Yes, in footer	Enabled	Admin sign in		

4.   Non-Functional Requirements

Since the system is web based it is crucial that the website is responsive and developed for mobile-first with scalability in mind, insuring that the finished product looks just as good on all mobile devices and tablets, as it would on a PC and laptop.

The platform is accessed through the internet with the use of a browser, making the finished product very accessible, available and usable to all users independent of platform choices (Android/ IOS / Windows / Linux).

The software will not be requiring user accounts, with the exception of administrator accounts, making compliance with privacy laws and other concerns regarding privacy and personal data obsolete.

The platform must be able to integrate seamlessly with the other systems in our collaboration, in this case, spaceX apis, NASA live streams and other required apis and services needed to complete this service.

the finished product must be focused on usability and performance, making the website as easy to use as possible for our end-users , and making sure the web pages are as stable as possible and cutting down load time where it is physically possible.
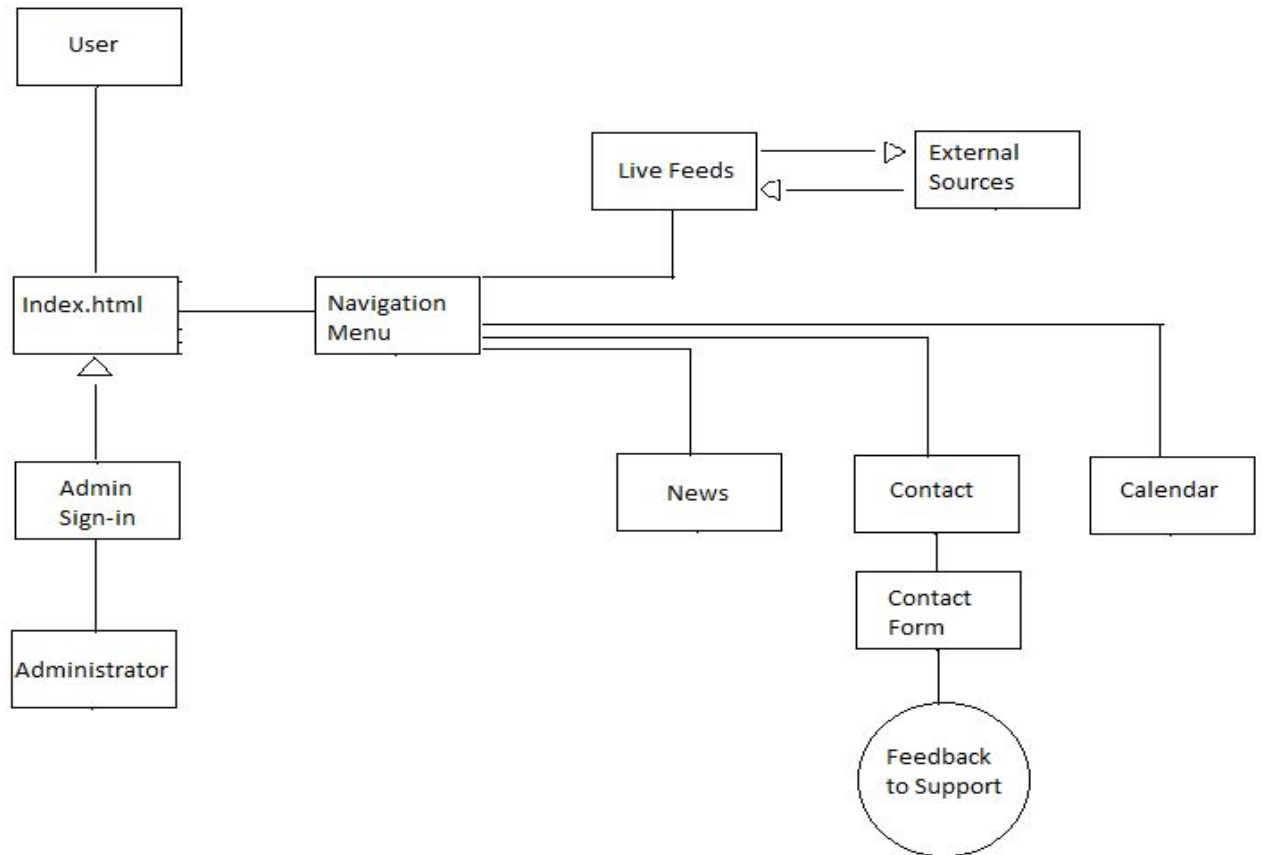
5.   Reporting Requirements

The report will be used to keep track of the information, evaluate the project and the finished product. The report will contain information on methods used, results, an introduction to the project and product, and an evaluation of how the work process went, and the final product once its completed. The report must include the points listed below.

- Interpretation
- Planning, functional spec, Gantt chart
- Target audience / research
- Graphic design, design principles, typography, color
- Html / css, Semantics, structure
- SEO / Content Strategy / WCAG
- Interface
- Design
- Personae / Scenario
- Affordances
- Navigation
- Persuasion
- Wireframing
- Prototyping
- Javascript
- Implementation / Rollout
- Conclusion

Report must be a PDF file.

6. Integration Requirements

Data flow diagram

- *Api*

    - NASA Official Api

    - SpaceX open source Api

- *Integrations*

    - SpaceX news and media center

    - NASA official youtube channel

    - spaceflightnow.com Launch and Schedule website

- *Interfaces*

    - Youtube

    - NASA website and api

    - SpaceX website and api

    - spaceflightnow website

- *Frameworks and web technology*

    - Bootstrap 4

    - JSON

    - Git

6.1 Exception Handling/ Error Reporting

Exception/ Error ID	Error	Cause	Solution Strategy
255	Playback stopped	The live feed crashed or took too long to load	give the user a way to send feedback with error code and information about what happened and what they did to create the error.
403	Not Authorised	The user is trying to gain access to a website they are not Authorised to	have a good explanation to why the user is shown this page and provide a button or other way to get back to the home page
404	Webpage not found	the user is trying to gain access to a website that does not exists on our domain	have a good explanation to why the user is shown this page and provide a button or other way to get back to the home page