

# Software Requirements Specification (SRS) Document

**Project name:** Automate R&D Workflow

**Team number:** 31

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## Brief problem statement

The company has a lot of data that has been stored in lots of excel files which is inconvenient to work with. So, the client wants us to create a user-friendly GUI through which the company can interact efficiently with the database.

## System requirements

1. Web browser connected to Local Host
2. Technologies required:
  - a. Frontend: HTML, CSS, React JS
  - b. Backend: NodeJS
  - c. Database: MongoDB
3. Extra Packages Used:
  - a. Multer
  - b. Express
  - c. Framer-motion
  - d. Core

## Users profile

This is a locally hosted GUI for Arka Aerospace hence end users are the following:

1. **Manager:**
  - a. Mode: Manager Mode (Full access)
  - b. Profile: High level of proficiency with database management and administration of the whole application architecture.
2. **Employee:**
  - a. Mode: Employee Mode (Limited Access)

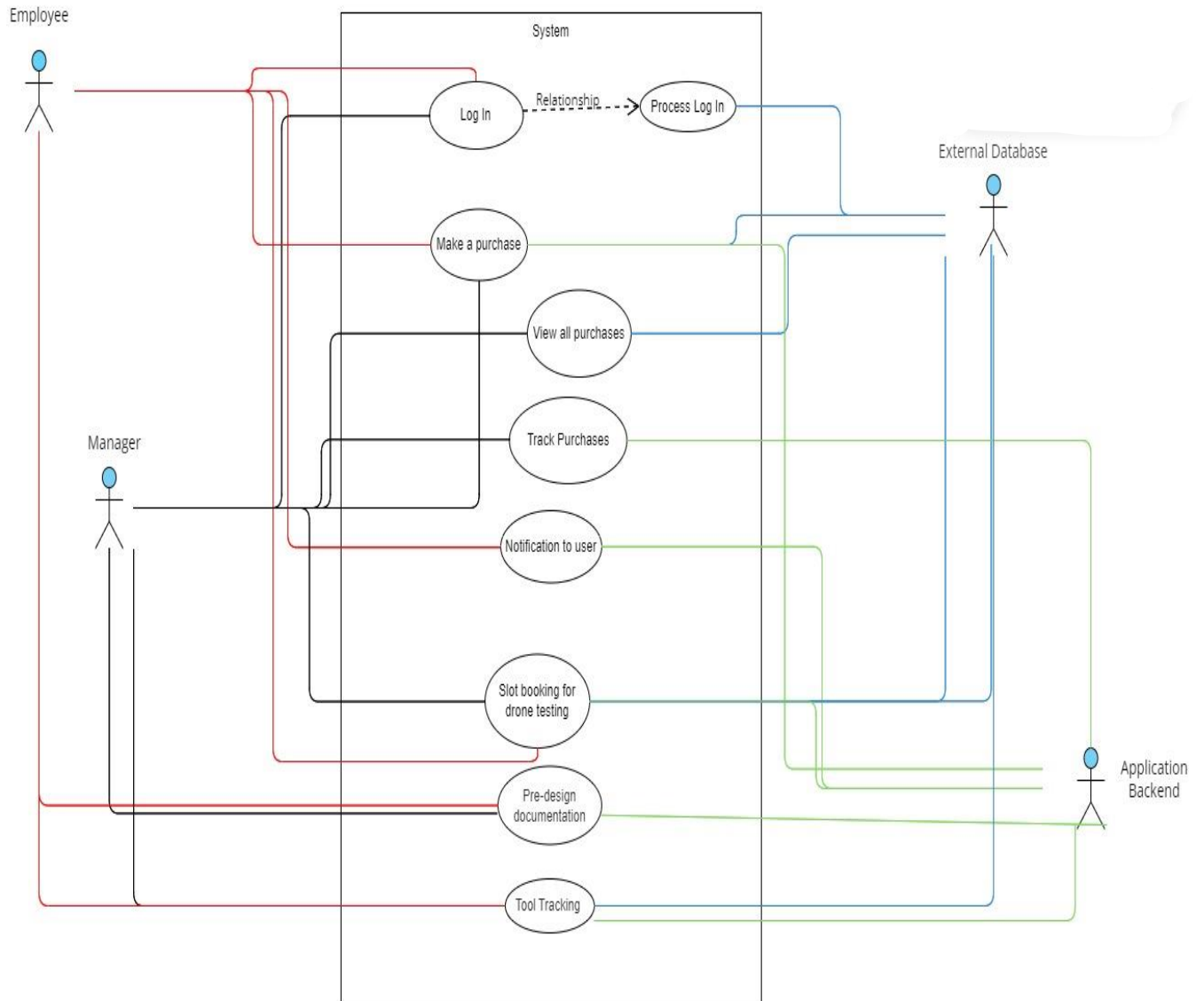
b. Profile: Basic familiarity with the working of the webpages and form filling.

### Feature requirements (described using use cases)

<b>No.</b>	<b>User Case Name</b>	<b>Description</b>	<b>Release</b>
1.	Log in	Existing user will enter details to log in	R1
2.	Process Log in	Authenticate user by verifying the entered information with database	R1
3.	Make a Purchase	Fill in form to make a new purchase	R1
4.	View all purchases	(Manager only) View all in progress and completed purchases and provide reviews/approvals	R1
5.	Track purchases	Check whether the item purchased was approved and if positive, then delivered or not.	R1
6.	Notification to User	Send notification to user on arrival of order	R1
7.	Book a slot for drone testing	Testing phase for the developed drone	R2
8.	Pre-design documentation	Documentations for all the approved drone designs	R2

9.	Tool tracking	Search for tools in the inventory database	R2
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## Use case diagram



## Use case description:

<b>Use Case Number:</b>	UC-01
<b>Use Case Name:</b>	Log in
<b>Overview:</b>	Users fill in their User ID/Email ID and Password to log in the system.
<b>Actors:</b>	Manager, Employee
<b>Pre-condition:</b>	User should be a registered employee of the company
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. User opens the system and is prompted with a Login page</li> <li>2. The user enters the required information i.e. User ID or Email ID and password</li> <li>3. User then submits the details using the “Log In” button</li> <li>4. Once registered, the name of the user is displayed in the navbar on all pages</li> </ol>
	<p>Alternate Flows:</p> <ol style="list-style-type: none"> <li>1. If the information entered is not recognized by the system, the system will display a message saying, “Invalid Username or Password”.</li> <li>2. The user is prompted to login again.</li> </ol>
<b>Post Condition:</b>	Once the login is successful, the user is redirected to the Home page.

<b>Use Case Number:</b>	UC-02
<b>Use Case Name:</b>	Process Log in
<b>Overview:</b>	The user login credentials are authenticated and based on their position in the login database they are given access to further pages
<b>Actors:</b>	Application backend
<b>Pre-condition:</b>	3. Database should be linked. 4. The user should be an employee of the company
<b>Flow:</b>	Main (success) Flow: 1. The system verifies the entered credentials against the stored data. 2. If the user id and password match, the system grants access to the User's account. 3. On verification, the user is redirected to the home page.
	Alternate Flows: 1. If the entered information is not recognized by the system, the system will display a message saying, "Invalid Username or Password" and prompts the user to re-login.
<b>Post Condition:</b>	On successful login, the user is granted access to their Arka Aerospace account.

<b>Use Case Number:</b>	UC-03
<b>Use Case Name:</b>	Make a Purchase
<b>Overview:</b>	User fills in a form to make a new inventory purchase
<b>Actors:</b>	Manager, Employee, Application Backend
<b>Pre-condition:</b>	User should be able to access the form
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. User fills in the details of the item to be purchased including component name, quantity and link to purchase</li> <li>2. Users must upload special documents if applicable, like when ordering an IC or semiconductor items.</li> <li>3. The user then selects his/her team and project name before clicking on the “Submit” button.</li> <li>4. After submitting, the information is stored in a database and user is re-directed to the homepage.</li> </ol>
	<p>Alternate Flows:</p> <ol style="list-style-type: none"> <li>1. If the user clicks on the Submit button without filling in the required details (marked with *) then the user is prompted to fill in that field.</li> </ol>
<b>Post Condition:</b>	After submitting the form, the user gets a prompt saying, “Purchase Successful”.

<b>Use Case Number:</b>	UC-04
<b>Use Case Name:</b>	View all purchases
<b>Overview:</b>	All the purchases made by Arka Aerospace employees are visible here. This includes the purchases which are yet to be delivered.
<b>Actors:</b>	Managers
<b>Pre-condition:</b>	<ol style="list-style-type: none"> <li>1. Connection to database which stores purchases</li> <li>2. The person accessing must be a manager.</li> </ol>
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. On clicking the button to view all purchases, it redirects to a new page where list of all items ordered are visible</li> </ol>
	<p>Alternate Flows:</p> <ol style="list-style-type: none"> <li>1. The manager can change the approval and status and update remarks which will be stored in the database dynamically.</li> </ol>
<b>Post Condition:</b>	On completion of the main flow, the user must view a list of all purchases made.



<b>Use Case Number:</b>	UC-05
<b>Use Case Name:</b>	Track Purchases
<b>Overview:</b>	The user can track the status of the purchases he/she made
<b>Actors:</b>	Manager, Employee, Application Backend
<b>Pre-condition:</b>	User should have a purchase history
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. User clicks on the “Track Purchases” button.</li> <li>2. The system displays all the purchases made by the user</li> <li>3. The user can track the status of their purchase with details like date of purchase, status of arrival (reached or pending), remarks and other component specific details.</li> </ol>
	Alternate Flows: N/A
<b>Post Condition:</b>	On completion of the main flow, the user must view a list of all purchases made by them.

<b>Use Case Number:</b>	UC-06
<b>Use Case Name:</b>	Notification to user
<b>Overview:</b>	The employee who has made a particular purchase will receive a notification on the arrival of that item
<b>Actors:</b>	Employee, application backend
<b>Pre-condition:</b>	The employee should have made a purchase
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. The application backend is connected to an external database which gets updated on the arrival of the item, the employee placed the order for. On its arrival it sends a notification to the employee regarding the same.</li> </ol>
	Alternate Flows: N/A
<b>Post Condition:</b>	The employee receives a notification regarding the arrival of the item.

<b>Use Case Number:</b>	UC-07
<b>Use Case Name:</b>	Book a slot for Drone Testing
<b>Overview:</b>	The user can book a suitable and available slot for testing their drone.
<b>Actors:</b>	Manager, Employee, Application Backend
<b>Pre-condition:</b>	There should be an available slot.
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. The user will be prompted to fill in a form selecting one of the available slots according to his/her convenience along with the team and project names.</li> <li>2. After filling in the necessary details and submitting the form, the slot will be booked for the user and the same will be updated in the database.</li> </ol>
	Alternate Flows: N/A
<b>Post Condition:</b>	The selected slot will be booked for the user.

<b>Use Case Number:</b>	UC-08
<b>Use Case Name:</b>	Pre-Design Documentation
<b>Overview:</b>	User can view all the pre-design documentations of the approved drone designs
<b>Actors:</b>	Manager, Employee, Application Backend
<b>Pre-condition:</b>	The database should not be empty
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. The user will be displayed a list of all the approved pre-design documentation.</li> <li>2. The user can also apply filters to view only the required documents.</li> <li>3. Every entry will have a link to the document pdf.</li> </ol>
	Alternate Flows: N/A
<b>Post Condition:</b>	The user should be displayed the list containing the pre-design documents.

<b>Use Case Number:</b>	UC-09
<b>Use Case Name:</b>	Tool tracking
<b>Overview:</b>	This will be used to track all the available tools in the inventory and where we can search for the tools the user needs.
<b>Actors:</b>	Employee, Manager
<b>Pre-condition:</b>	The tool inventory should not be empty
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. The user will be displayed list of tools available.</li> <li>2. The user can search in the list and can see if the tools he/she wants are available or not</li> <li>3. This helps to also keep a track of who took which tool</li> </ol>
	Alternate Flows: N/A
<b>Post Condition:</b>	The employee now has knowledge of whether the tool he/she needs is available in company inventory or not.