

# Software Requirements Specification (SRS) Document

**Project Title:** Personalized Offline Ads – Box Ads

**Team Name:** Team 36

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Live link:

<https://1drv.ms/w/c/1fcca4669ed5f966/ERoHaapz1t9EvI27VVEFcZ0BOVafLgjm sOolK5nB0lkyCg?e=FU8OHR>

## **Brief problem statement**

We must create a form that asks people about their interests. Subsequently, we must develop an algorithm or employ a pre-trained M.L. model to match customers' interests with products. We should send the result data to Logistic Partners.

Make a website with separate dashboards for administrators, ad agencies, and logistic partners, each having the specifications provided by the client. Additionally, create some tracking for ads based on QR codes. We should also create a payment gateway for transactions. If the requirements are refined, the statement might change.

## **System requirements**

The system requires Network connectivity and support of browsers which can render React and can carry backend operations which are written in Node and Express. The system also requires a database (Tentatively – MongoDB Atlas).

**Development environment** – Visual Studio Code

**Programming language** – Languages in M.E.R.N stack

**Collaboration Tools** – Git, WhatsApp

**Documentation Tools** – Microsoft Office, Notion

**Design/Presentation Tools** – Canva, Figma

## **Users profile**

Users of our system are classified into 4 groups:

1. E-Commerce Customers.
2. Advertisers.
3. Logistic Partners.
4. Admin.

**E-Commerce Customers:**

- These people are our targeted people.
- They will be asked to fill in a form generated by our system when they are placing their e-commerce order.
- The form information will be stored in our system. We need this information to send some useful/related product brochures to the customer.
- They will not use our website.
- Familiarity: Customers need to know how to fill in and submit a form. No need for familiarity in using computers.

**Advertisers:**

- These are the ad agencies who collaborated with our website.
- They will use the system to check their advertisements' status (Ex: Number of copies sent, Number of QR scans etc.).
- They can request the admin to publicize their new ads. They pay the admin to publicize their ads to the customers.
- Familiarity: Advertisers should be familiar with our software/website.

**Logistics Partners:**

- These are the delivery agencies which are collaborating with our website.
- They use the website to view the list of order ids and brochures to be dispatched to the customers.
- They can use the website to get soft copies of the advertisements.
- Familiarity: Logistics partners should be familiar with our software/website.

**Admin:**

- This is the person who administrates the system.
- He monitors and approves access for different functionalities like ad approval, place offers, priorities, etc...
- Familiarity: Operating the system, Basic understating of User Interface in English.

**Feature requirements (described using use cases)**

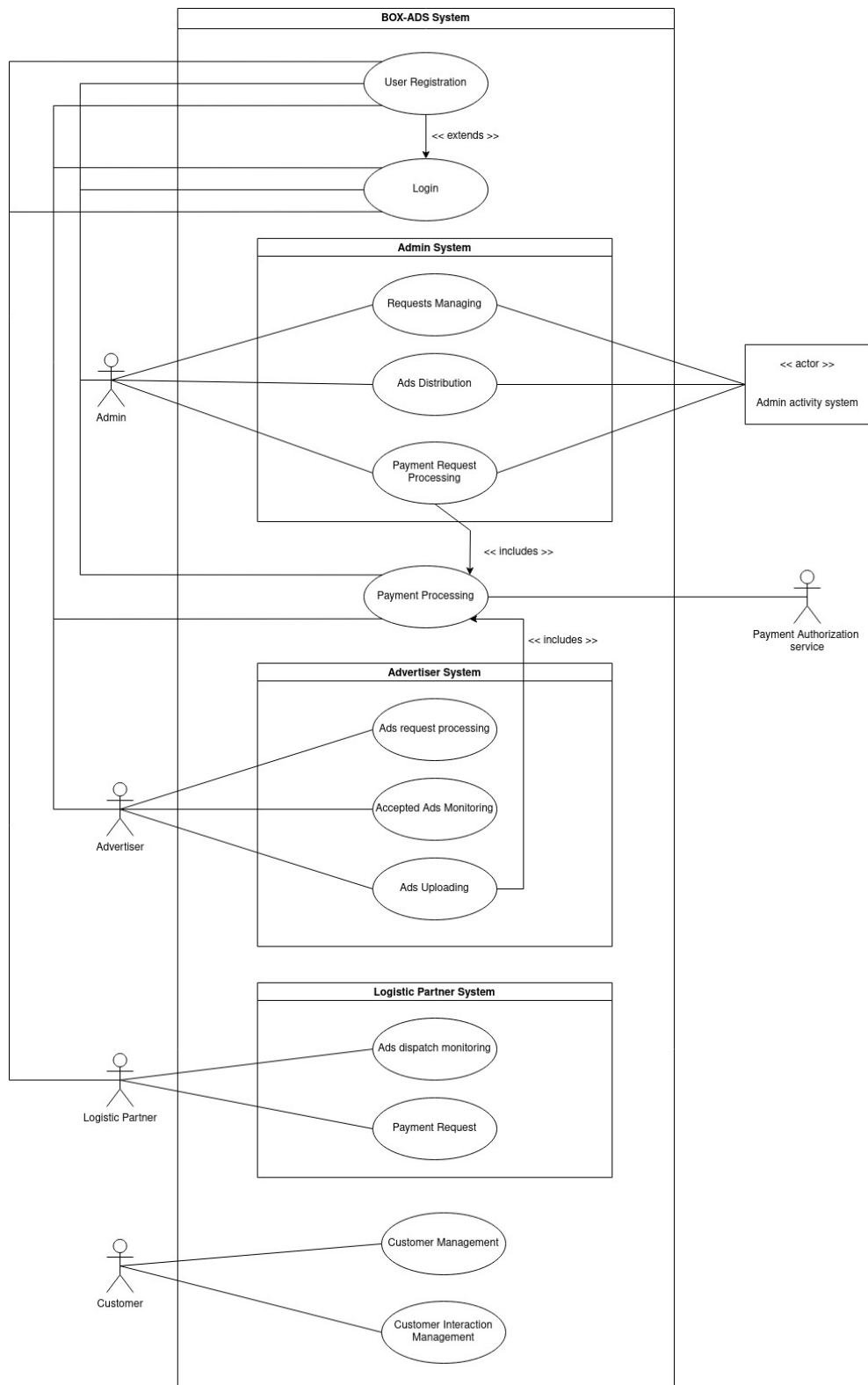
No.	User Case Name	Description	Release
1.	login	System: asks for credentials (email, password) Actors (Admin, logistic partners, advertisers): Enters the credentials. System: displays login option.	R1

		User: selects login option. System: validate the credentials. If valid credentials then go to their respective dashboards, else ask to enter for valid credentials.	
2.	Ad request processing	advertiser: selects the option request for publishing ad. System: asks for ad details, amount, duration of ad. Advertiser: fills out the details about ad and submits. System: sends the request and displays the status of the ad (pending, accepted, rejected). If admin accepts the request, then it shows status accepted and provides the URL for the QR code in the brochure or else if admin rejects then it shows rejected or pending.	R1
3.	Ads monitoring	Advertiser: selects the ads in the ads section (where all the ads uploaded to the admin are displayed). System: displays the stats of the number of customers interacting with this ad.	R1
4.	Ads dispatch monitoring	System: displays all the ads to be printed in the printed ads section. Logistic partner: selects an ad from the print ads section. System: display the ad details (brochures, order_id details).	R1
5.	Payment request	System: displays the option payment request after it has crossed the system threshold value. Logistic partner: selects payment request option. System: displays the payment status in the payments section.	R2
6.	Requests managing	System: displays all the ad requests in the ad requests section. Admin: selects an ad from the request section. System: displays the ad details (amount, ad description, duration, Number of copies) and asks for accept or reject.  Admin: selects an option (accept or reject). System: if admin selects accept then it removes the ad in the ad requests section and displays it in the accepted ads section, else if he selects reject option it removes the ad from the ad requests section.	R1
7.	Ads distribution	system: displays all the ads in the accepted section. Admin: selects an ad from the ads section. System: displays the ad details (brochures, customer details(order_ids) and the logistic partners (for these order_ids currently in their warehouses at the time of distribution)).	R2

8.	Customer interactions management (scanning QR)	Customer: scan the QR code on the brochure. System: moves to temporary page and then the ads monitoring system increases the customers interaction count for that ad and redirects to advertiser's website.	R2
9.	Payment processing	Users (advertiser, admin): selects payment System: displays payment options users: selects a payment mode System: redirects to the payment gateway. users: pays the amount. System: redirects him back to his page, displays it as successful transaction if payment is successful otherwise displays payment failed.	R2
10.	Customers management	Customer: Gets a form after placing his order in a ecommerce website. System: generates questions in the form eg: questions related to their geographic location email or phone number, hobbies, etc. Customer: answers the questions in the form and submits it. System: record the answers of that customer and the order-Id (from the ecommerce website) and categorize him based on the answers and redirect him back to that ecommerce website. Customer: will continue his session in ecommerce website.	R1
11.	Payment requests processing	System: displays all the payments to be made in the payments request section. Admin: selects one of the entries in the payments request section. System: displays the information of the requesting person (logistic partner, payment details) and an option to pay the requested amount. Admin: selects the option pay. system: if admin selects the option pay then payment processing system handles the payment.	R2
12.	Ad upload	System: displays all ads that are accepted by the admin. Advertiser: selects one of the ads. System: displays option to upload brochures. Advertiser: upload brochure. System: displays the option for payment. Advertiser: selects the option for payment. System: payment processing system will handle the payment and if the transaction is successful, it displays the send option, else it asks to upload the brochure again. Advertiser: if payment is successful, he selects the send option or else he should start by uploading the brochure. System: displays the ad is successfully uploaded and it is added to the ads section.	R1

13.	User registration	System: Asks to enter email-id, password, user type (Advertiser / Logistics Partner), details of the Respective Company / Org. User: enters his email-id, password, type of user, company. System: displays signup option. User: selects signup option. System: displays signup in successful and	R1
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## Use case diagram



## Use case description

<b>Use Case Number:</b>	UC-00
<b>Use Case Name:</b>	login
<b>Overview:</b>	Purpose: to identify the valid users of the system. Users enter their registered credentials and submit, the system validates and sends the login status with other details
<b>Actors:</b>	Advertiser, logistics partner
<b>Precondition:</b>	Enter the credentials (email, password) and click on submit
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Enter the email.</li> <li>2. Enter the password.</li> <li>3. Select the user type (Advertiser / Logistics partner).</li> <li>4. Click on login option.</li> </ol>
	Alternate Flows: Else if invalid credentials, display invalid credentials and asks to enter the credentials again.
<b>Post Condition:</b>	If valid credentials, then redirect the users to their respective pages. <ol style="list-style-type: none"> <li>1. Admin to admin dashboard.</li> <li>2. Advertisers to advertiser's dashboard.</li> <li>3. Logistic partners to logistic partner dashboard.</li> </ol>

<b>Use Case Number:</b>	UC-01
<b>Use Case Name:</b>	User registration
<b>Overview:</b>	Purpose: For new users to use the system. For users (advertiser, logistics partner) to use the platform, they have to register and set their credentials. The system stores these details in the database.
<b>Actors:</b>	Advertisers, logistic partner
<b>Pre condition:</b>	Enter the credentials (email, password) and click on signup.
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Selects the user type (Advertiser / Logistics Partner)</li> <li>2. Enters details of the Respective Company / Org.</li> <li>3. Enters the email.</li> <li>4. Enters the password.</li> </ol>
	Alternate Flows: None.

<b>Post Condition:</b>	User registration is successful and asks to enter the email and password once again to sign up.
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<b>Use Case Number:</b>	UC-02
<b>Use Case Name:</b>	Ad request processing
<b>Overview:</b>	Purpose: Sending a request to the admin to publish the ad. Advertisers first need to send request to the Admin to approve / reject the ad.
<b>Actors:</b>	Advertiser
<b>Pre condition:</b>	Advertiser selects request option.
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Advertisers selects the request option.</li> <li>2. Enters ad details.</li> <li>3. Enters payment details(amount).</li> <li>4. Enters the number of targeted people.</li> <li>5. Click on submit.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	Displays status (Accepted, Rejected, Pending) of the ad. If accepted, the status will be changed to "Accepted" and it will be added to the accepted ads section.

<b>Use Case Number:</b>	UC-03
<b>Use Case Name:</b>	Ads monitoring
<b>Overview:</b>	Purpose: To monitor the ads progress or reach. The system records every time someone has scanned the QR and updates stats of the advertisement.
<b>Actors:</b>	Advertiser.
<b>Pre condition:</b>	Select the accepted ads section.
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Select the accepted ads section.</li> <li>2. Select the one of the ads in this section.</li> </ol>
	Alternate Flows: None.



<b>Post Condition:</b>	Displays the stats of number of customers have interacted with through that ad.
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<b>Use Case Number:</b>	UC-04
<b>Use Case Name:</b>	Ads dispatch monitoring
<b>Overview:</b>	Purpose: displays all the ad details of the ads to be printed.
<b>Actors:</b>	Logistic partner.
<b>Pre condition:</b>	None.
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Selects the ads dispatch section.</li> <li>2. Selects one of the ads in this section.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	Displays all the ad details <ol style="list-style-type: none"> <li>1. Displays the ad brochure.</li> <li>2. Displays the order_id details (mapping of order_id s with the following ad)</li> </ol>

<b>Use Case Number:</b>	UC-05
<b>Use Case Name:</b>	Payment request (logistics partner)
<b>Overview:</b>	Purpose: logistic partner requests the admin for payment. System: Keeps track of the bill by accumulating all the orders that were dispatched with ads. Displays request option after it has crossed the threshold value (default / set by admin). Logistic partner: selects payment request option. System: displays the payment status in the payments section.
<b>Actors:</b>	Logistic partner
<b>Pre condition:</b>	The number of brochures printed / price accumulated for all the orders should cross the threshold value
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Logistic partner clicks on payment request option.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	Displays the payment status in the payments section. If paid the status will be changed to paid else pending.

<b>Use Case Number:</b>	UC-06
<b>Use Case Name:</b>	Advertisement Request management
<b>Overview:</b>	<p>Purpose: To see the requests and decide to accept them or not.</p> <p>System: displays all the ad requests in the ad requests section.</p> <p>Admin: selects an ad from the request section.</p> <p>System: displays the ad details (amount, ad description, duration, Number of copies) and asks for accept or reject.</p> <p>Admin: selects an option (accept or reject).</p> <p>System: if admin selects accept then it removes the ad in the ad requests section and displays it in the accepted ads section, else if he selects reject option it removes the ad from the ad requests section.</p>
<b>Actors:</b>	Admin.
<b>Pre condition:</b>	Select the requests section.
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. Selects the request section.</li> <li>2. Selects one of the ads.</li> <li>3. Displays the ad details (amount, ad description, duration, number of copies).</li> <li>4. Select an option accept or reject.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	If the admin selects accept option, then the add will be added to accepted ad section and will be removed from, else if he selects reject option then the ad will be removed from the ad requests section.

<b>Use Case Number:</b>	UC-07
<b>Use Case Name:</b>	Ads distribution.
<b>Overview:</b>	Purpose: distributing personalized ads.
<b>Actors:</b>	Logistics Partner
<b>Pre condition:</b>	Only after the approval of admin, distribution will be started.
<b>Flow:</b>	Main (success) Flow:

	<ol style="list-style-type: none"> <li>1. Based on Customer preferences in the form, System will map them to ads related to them.</li> <li>2. These mappings of Order_ids and ads will be sent to Logistic Partner.</li> <li>3. Logistics Partner will start to print and distribute them in the packages.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	-

<b>Use Case Number:</b>	UC-08
<b>Use Case Name:</b>	Customer Interactions (Scanning QR)
<b>Overview:</b>	Purpose: To track the number of interactions for each ad.
<b>Actors:</b>	Customer
<b>Pre condition:</b>	After ads are delivered
<b>Flow:</b>	<p>Main (success) Flow.</p> <ol style="list-style-type: none"> <li>1. Customer scans the QR</li> <li>2. System will redirect them to a temporary page where the count will be increased in the database</li> <li>3. Then, the customer will be redirected to “Main” advertiser’s website.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	Incremented count for the particular ad whose QR has been scanned

<b>Use Case Number:</b>	UC-09
<b>Use Case Name:</b>	Payment processing.
<b>Overview:</b>	<p>Purpose: To make payments.</p> <p>Users (advertiser, admin): selects payment  System: displays payment options  users: selects a payment mode  System: redirects to the payment gateway.  users: pays the amount.  System: redirects him back to his page, displays it as successful transaction if payment is successful otherwise displays payment failed.</p>
<b>Actors:</b>	Admin, Advertiser.

<b>Pre condition:</b>	Select the payment option.
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Selects the payment option.</li> <li>2. Selects payment mode.</li> <li>3. Redirects to the payment gateway.</li> <li>4. Makes payment.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	If the transaction is successful then displays payment is successful else displays payment failed.

<b>Use Case Number:</b>	UC-10
<b>Use Case Name:</b>	Customers Management
<b>Overview:</b>	Purpose: To record the interests of the customer (eg: hobbies,). Customer: Gets a form after placing his order in an ecommerce website. System: generates questions in the form eg: questions related to their geographic location email or phone number, hobbies, etc. Customer: answers the questions in the form and submits it. System: record the answers of that customer and the order-Id (from the ecommerce website) and categorize him based on the answers and redirect him back to that ecommerce website. Customer: will continue his session in ecommerce website.
<b>Actors:</b>	Customer
<b>Pre condition:</b>	Customer has purchased items on the ecommerce website, then will be redirected to the form page.
<b>Flow:</b>	Main (success) Flow: <ol style="list-style-type: none"> <li>1. Questions will be displayed in the form based on customers previous interactions.</li> <li>2. Customer fills the questions in the form and submits it.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	Customer will be redirected back to the ecommerce website.

<b>Use Case Number:</b>	UC-11
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<b>Use Case Name:</b>	Payment Requests processing.
<b>Overview:</b>	<p>Purpose: To make payments to the requests present in the payment requests section.</p> <p>System: displays all the payments to be made in the payments request section.</p> <p>Admin: selects one of the entries in the payments request section.</p> <p>System: displays the information of the requesting person (logistic partner, payment details) and an option to pay the requested amount.</p> <p>Admin: selects the option pay.</p> <p>system: if admin selects the option pay then payment processing system handles the payment.</p>
<b>Actors:</b>	Admin
<b>Pre condition:</b>	Select the payment requests section.
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. User Selects the payment requests section.</li> <li>2. User Select one of the requests.</li> <li>3. Displays the information of the person making request and the amount to be paid.</li> <li>4. Selects payment option.</li> <li>5. Then the payment processing system handles the payment.</li> </ol>
	Alternate Flows: None.
<b>Post Condition:</b>	If the transaction is successful, then displays payment is successful else displays payment failed.

<b>Use Case Number:</b>	UC-12
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<b>Use Case Name:</b>	Ad upload
<b>Overview:</b>	<p>Purpose: to be able to send ads to the admin.</p> <p>System: displays all ads that are accepted by the admin.</p> <p>Advertiser: selects one of the ads.</p> <p>System: displays option to upload brochures.</p> <p>Advertiser: upload brochure.</p> <p>System: displays the option for payment.</p> <p>Advertiser: selects the option for payment.</p> <p>System: payment processing system will handle the payment and if the transaction is successful, it displays the send option, else it asks to upload the brochure again.</p> <p>Advertiser: if payment is successful, he selects the send option or else he should start by uploading the brochure.</p> <p>System: displays the ad is successfully uploaded and it is added to the ads section.</p>
<b>Actors:</b>	Advertiser.
<b>Pre condition:</b>	The particular should be in the accepted ads section.
<b>Flow:</b>	<p>Main (success) Flow:</p> <ol style="list-style-type: none"> <li>1. Selects ads in the accepted ads section.</li> <li>2. Selects upload option.</li> <li>3. Uploads the brochure.</li> <li>4. Selects payment option.</li> <li>5. Display send option.</li> </ol>
	Alternate Flows: if payment fails, he will be asked to repeat the flow again.
<b>Post Condition:</b>	Displays ad is successfully uploaded and it is added to ads section.