

ZeeSofts

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Barq

System Analysis

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1 Introduction

This document contains the system analysis for Barq project. It presents its high-level functions, backend functions, architecture overview and mobile app design reference. Details of implementation are in this chapter

1.1. Overview

Barq is a trusted platform which connects Travelers with Clients with shipping needs all around the country.

Barq project consists of:

- Mobile application for Customers (Native iOS and Android).
- Mobile application for Travelers (Native iOS and Android).
- The Administrator's website.

1.2. Key features (Barq customer)

- iOS & Android native application
- Customer can sign up using Email address or phone number
- Customer can choose user name and an avatar
- Customer can sign-in via mobile application using Email, or phone number and password
- Customer can reset password either using their Email address or phone number
- From settings options, customer can customize notifications. Customer can turn On/Off Email, Text messages, and push notifications.

- Customer can add his payment info (Optional)
- Customer can view all trips from current location
- Customer also can specify trips' dates to narrow them to his needs
- Each trip will have the following information (current location , destination, departure date and time, expected delivery date and time, "driver's name and ratings")
- When selecting a trip, customer must enter the shipment and recipient information:
(Recipient name, Phone number, and Shipment category)
- The trip cost and payment type will be shown to the customer
- Customer should enter the payment type then confirm the trip
- Customer can create a New order.
- To create a new order, customer should select from where does he/she want to ship and where to drop off.
- Customer should select a date which limited by 48hrs. No post shipments available.
- Customer can select the shipment category
- Once he selects the category, the order amount will be shown
- Customer should specify his payment type
- After the customer confirm the order, his new order will be shown to all the drivers in the same city
- Once the order is approved by a driver, customer can check the expected delivery date and time
- Customer can either accept or reject the driver
- If customer choose to accept the driver then he should provide the recipient name and phone number.
- Customer will be able to see the trip cost and his payment type
- Customer can review all orders, the orders will be organized historically and according to the delivery status in My orders

- Customer can track the shipments
- The customer will be notified on every shipping status changes
- The customer can view shipment photos taken by the driver. Customer can report if the photos doesn't match his shipment
- Once the shipment is delivered, customer can rate the driver and give his feedback

1.3. Key features (Barq driver)

- iOS & Android native application
- Drivers are created by Admin
- Driver can sign up via application using Email, or phone number and password.
- Note: Driver will not be able to use the application before he receives an invitation from the company to validate his info
- Driver can sign-in via mobile application using Email and password
- Driver can set up his personal profile settings
- Driver can switch On/Off his status.
- If driver want to switch his status to offline, the new trip will be deleted
- Once driver is online, application will use his current location to view all customers' orders in the same city.
- Driver can view each order details. Each order should have departure date, destination, and shipment category
- Driver can approve an order by entering his expected delivery date and time
- Driver now will wait for the customer confirmation
- Once the order is confirmed by the customer, the driver cannot approve any other orders
- If the driver wants to approve another order, then he has to choose either to "approve the new order and cancel the previous one OR stay with the previous order "

- Driver cannot approve an order when he has an Ongoing trip
- Driver can create a trip by selecting his current location and the destination he's going to
- Driver must select departure day/time, and expected delivery time after departure - which shouldn't exceed 24hrs after picking up the shipment -
- Driver should pick up the shipment in less than 48 hrs.
- Note: trip will not be visible to customers before 48 hrs prior to trip time.
- Driver cannot create more than one trip at a time
- Driver can only pick the shipments on his current city.
- On My trips, the Driver can view his trips and orders which will be organized historically and according to the delivery status
- Driver can see his all time and period earnings

1.4. Key features (Admin Web App)

- Administrator can sign in using Email and password
- Administrator can navigate through Dashboard, Drivers, Customers, Trips, Shipments, Cities, Administrators, Audit, Payments, Reports, Push notifications, and Settings.

Dashboard

- Administrator can view the latest orders and Trips
- Statistics of sign-ups and orders for the last 24 hours will be shown in administrator dashboard.
- Administrator can view how many customers and drivers are online.
- Administrator can view cities activity status

Drivers

- Administrator can view drivers and their information:
(Driver name, Email, phone number, number of orders, driver ratings, last login, current trips, cash payments ...etc.)
- Administrator can edit drivers.
- Administrator can create new drivers.
- Activate/Deactivate drivers.
- To create a new driver an administrator should provide:
(Driver Name, driver Email, Phone Number, default Address, birthday date, nationality, national ID number)

Customers

- Administrator can view all the customers and their information.
- Administrator can view customer names, customer contact information, registration dates, number of orders, payment types, customers ratings ...etc.)
- Administrator can create a new customer.
- To create a new customer: (Customer name, customer Email, customer phone number)

Orders

- Administrator can view all orders and its details:
(Customer name, customer Email, customer phone number, from - to, order's departure date, order's expected delivery date/time, recipient name, recipient phone number, shipment category, status, driver ID, driver name)
- Administrator can create a new order for a customer.
- To create a new order:

(Customer name, Email, phone number, order date, from - to, recipient name, recipient phone number, shipment category and size)

- Administrator can assign an order to a driver

Trips

- Administrator can view all the trips and its details:

(Trip ID, driver name, driver ID, trip date, number of customers requesting the trip, shipment categories and sizes...etc.)

- Administrator can create a new trip for a driver.
- To create a trip:

(Driver name, driver ID, driver Email, driver phone number, departure and delivery date/time, shipment categories and sizes, maximum weight -Optional- ...etc.)

Shipments Categories

- Administrator can categorize shipments, Example of shipments categories: Documents, boxes, electronics ...etc.-
- Administrator can create a new category.
- To create a new category:

(category name and description).

Shipment Sizes Names

- Administrator can view all shipment sizes names.
- Shipment size will be measured according to its width, length, weight, and height.
- Administrator can create a new shipment size name by providing:
(width, length, weight, height and give examples of the shipment size that admin want to

create)

- Shipment size will not be shown in this version

Cities

- Administrator can view all the covered cities. Administrator can view city activity status.
- Administrator can add a new city.

Administrators

- Administrator can view all the Administrators info:
(Administrator name, Administrator Email, Administrator status, last seen, and the last actions)
- To create a new Administrator:
(Administrator name, user type, Email and phone number)

Audit

- In Barq administrator website, all the actions will be logged in audit section.
- Administrator can view all actions and its details:
(Action, user name, user ID, date, old date ...etc.)

Payments

- View all paid orders in details:
(Order ID, Total cost, Our income, Driver income, Payment type)
- View drivers' payments details: (Driver name, Total cash, Total CC, Payables - , Receivables +, Total)

Reports

- Administrator can view and export reports of all trips and orders details
- View reports based on many filters:
(customer, order status, driver, payment method, amount, date, from, to)

Push notifications

- Administrator can send push notifications to all customers and drivers.
- Administrator can filter drivers and customers by their addresses and ID numbers.

Settings

- Administrator can view shipping prices and create a new shipping price.
- To create a new price, Administrator needs to provide:
(Number of kilometers and the price)

From Administrator settings

- Administrator can stop drivers from creating trips, Administrator can stop customers from making requests ...etc.
- Administrator can turn off the system.

1.5. Server Application key features

- All trips and orders history, client/driver/administrator activity, sign-ins/ups must to stored forever
- All trip and order information, user information, user profile must not be deleted actually but marked as deleted
- All client/drivers/administrators actions must be logged including IP address and detailed

- action information
- All orders and trips will be stored and available for data analysis
- Server Application can authorize operators (customers/drivers/administrators)
- All communications between client device and backend, must be secured using SSL
- Server Application must able to store images and other media content on CDNs
- Trips and Orders will be selected according to the zone the customer is located at
- Server Application must check if the client/driver enabled before respond with information about the customer/driver
- Server Application must change order and trips statuses according to its business process phase
- Push Notifications will be sent according to order status changes according to requirements

2 System Interaction Model and applications use-cases

2.1. Client and driver applications use-cases

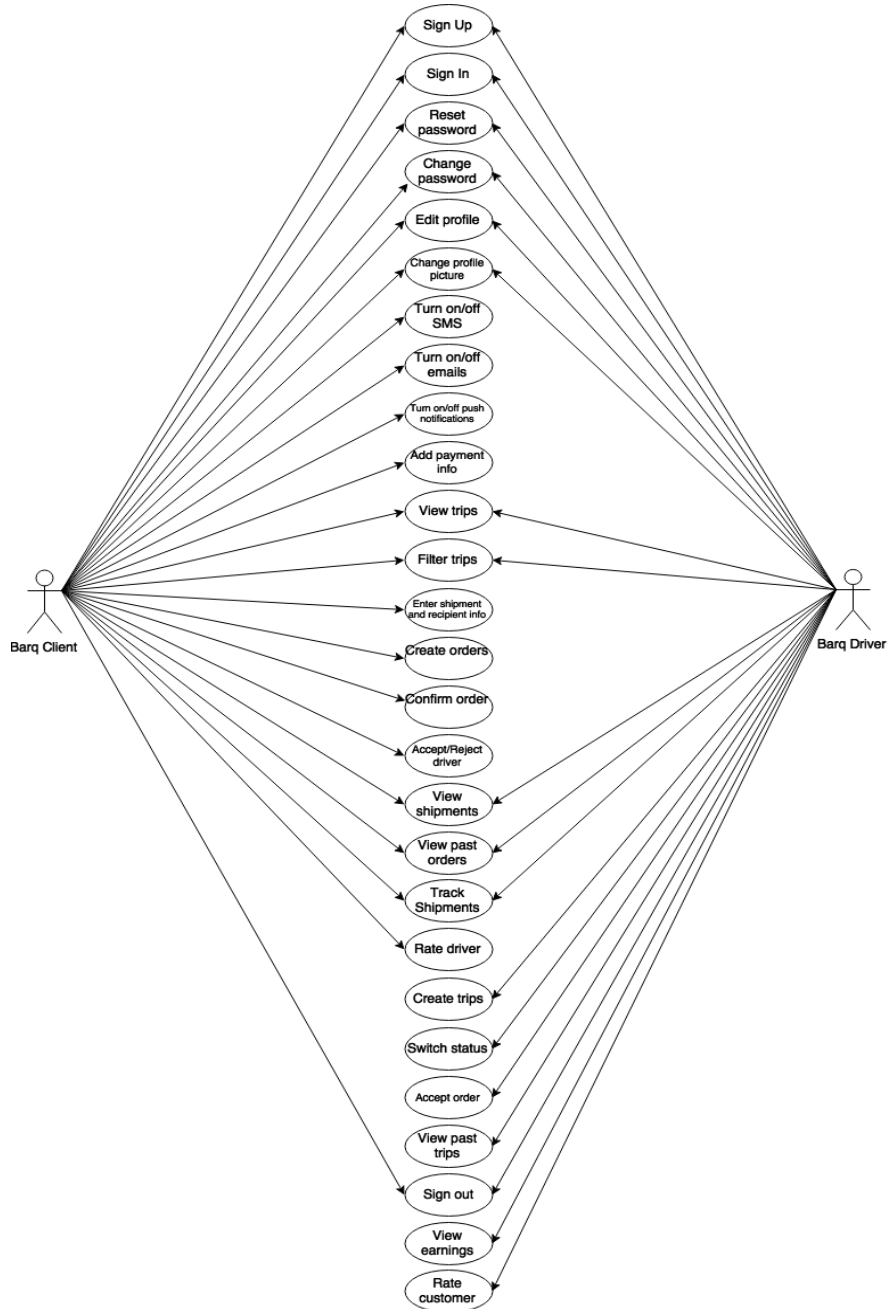


Fig 2.1.1 Client and Driver Application Use-cases

2.2. Admin application use-case

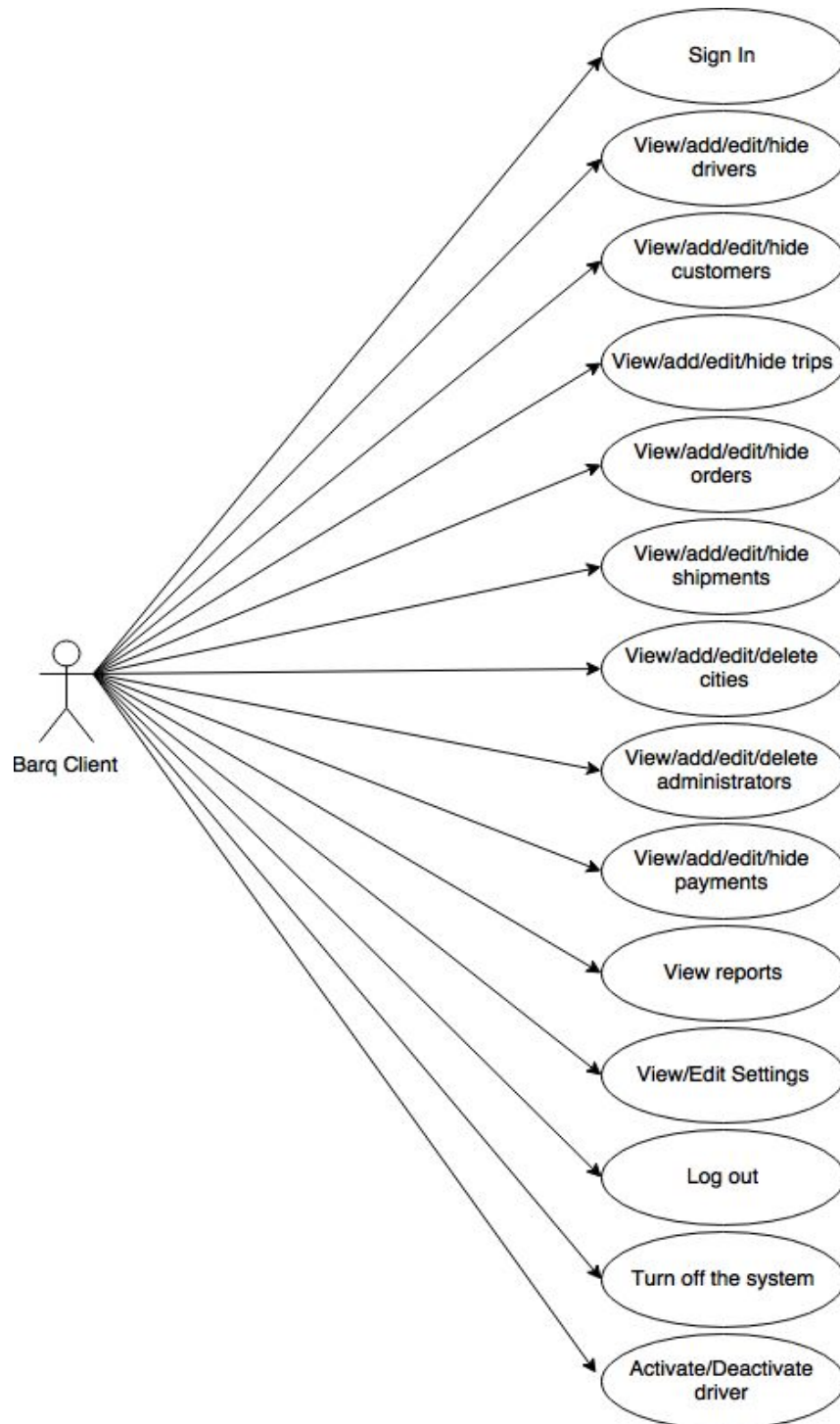


Fig 2.2.1 Client and Driver Application Use-cases

2.3. Customer application use-cases

Customer application use-cases are made according to approved application features in chapter 1.2 and according to approved sketches files “Barq Customer sketches.pdf”

1- Launch user application

Table 3: **Launch user application**

Use Case	Launch user application
Goal	Successfully loaded application on user device
Actor	Customer
Preconditions	None
Trigger	Platform specified
Success Scenario	Display application intro
Post Condition	None

2- Sign in

Table 4: **Sign in**

Use Case	Process sign in
Goal	Authenticate user on server
Actor	Customer
Preconditions	User phone exists, password matches
Trigger	Button “Login” pressed
Success Scenario	User authenticated
Post Condition	Display products catalog

3- Sign Up

Table 5: **Sign Up**

Use Case	Sign Up
Goal	Add a new entry to users database and required dependencies
Actor	Customer
Preconditions	Validate input fields
Trigger	Click on Sign Up button
Success Scenario	Create new necessary fields into database
Post Condition	Display app main page

4- Password reset

Table 6: **Password reset**

Use Case	Password reset
Goal	Reset user password
Actor	Customer
Preconditions	Email match user
Trigger	Button Forgot password clicked
Success Scenario	Change user password to random password and send it via email
Post Condition	Display alert “Password reset, check your email” and display Sign in page

5- Password change

Table 7: Password change

Use Case	Password Change
Goal	Change user password
Actor	Customer
Preconditions	Customer has been signed in , Password match
Trigger	Button Password change clicked
Success Scenario	Change user password to the new password typed by
Post Condition	Display alert “Password changed”

6- Edit profile

Table 8: Edit profile

Use Case	Edit profile
Goal	Edit profile
Actor	Customer
Preconditions	None
Trigger	Button Edit profile clicked
Success Scenario	Save newly edited profile
Post Condition	Display new profile data

7- Edit profile photo

Table 9: **Edit profile photo**

Use Case	Edit profile photo
Goal	Edit profile photo
Actor	Customer
Preconditions	None
Trigger	Button Edit photo clicked
Success Scenario	Save newly edited photo
Post Condition	Display new profile photo

8- Turn on/off SMS/Emails/Push Notifications

Table 10: **Turn on/off SMS/Emails/Push Notifications**

Use Case	Turn on/off SMS/Emails/Push Notifications
Goal	Turn on/off SMS/Emails/Push Notifications
Actor	Customer
Preconditions	None
Trigger	Button “Turn on/off SMS/Emails/Push Notifications” clicked
Success Scenario	Turn on/off SMS/Emails/Push Notifications
Post Condition	Save newly edited SMS/Emails/Push Notifications settings

9- Add payment info

Table 11: Add payment info

Use Case	Add payment info
Goal	Add payment info
Actor	Customer
Preconditions	None
Trigger	Button “Add payment info” clicked
Success Scenario	Added new payment info
Post Condition	Display new payment info

10- View trips

Table 12: View trips

Use Case	View trips
Goal	View trips
Actor	Customer
Preconditions	None
Trigger	Button View trips clicked
Success Scenario	Display trips
Post Condition	None

11- Filter trips

Table 13: **Filter trips**

Use Case	Filter trips
Goal	Filter trips
Actor	Customer
Preconditions	None
Trigger	Trips Filter selected
Success Scenario	Display trips
Post Condition	None

12- Edit shipment and recipient info

Table 14: **Edit shipment and recipient info**

Use Case	Edit shipment and recipient info
Goal	Edit shipment and recipient info
Actor	Customer
Preconditions	New order button pressed or trip selected
Trigger	None
Success Scenario	Fill shipment and recipient info
Post Condition	None

13- Create order

Table 15: **Create order**

Use Case	Create order
Goal	Create order
Actor	Customer
Preconditions	Create order button pressed
Trigger	None
Success Scenario	Order created
Post Condition	None

14- Create order

Table 16: **Create order**

Use Case	Create order
Goal	Create order
Actor	Customer
Preconditions	Create order button pressed
Trigger	None
Success Scenario	Order created
Post Condition	None

15- Confirm order

Table 17: Confirm order

Use Case	Confirm order
Goal	Confirm order
Actor	Customer
Preconditions	Confirm order button pressed
Trigger	None
Success Scenario	Order confirmed
Post Condition	None

16- Accept/Reject Driver

Table 18: Accept/Reject Driver

Use Case	Accept/Reject Driver
Goal	Accept/Reject Driver
Actor	Customer
Preconditions	Customer order placed
Trigger	None
Success Scenario	Driver Accepted/Rejected

Post Condition	None
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17- View shipments

Table 19: **View shipments**

Use Case	View shipments
Goal	View shipments
Actor	Customer
Preconditions	None
Trigger	Button View shipments clicked
Success Scenario	Display shipments
Post Condition	None

18- Track shipments

Table 20: **Track shipments**

Use Case	Track shipments
Goal	Track shipments
Actor	Customer
Preconditions	None
Trigger	Button Track shipments clicked
Success Scenario	Display shipments
Post Condition	None

19- View past orders

Table 21: **View past orders**

Use Case	View past orders
Goal	View past orders
Actor	Customer
Preconditions	None
Trigger	Button View past orders clicked
Success Scenario	Display past orders
Post Condition	None

20- Rate driver

Table 22: **Rate driver**

Use Case	Rate driver
Goal	Rate driver
Actor	Customer
Preconditions	Shipment delivered
Trigger	Rate driver clicked
Success Scenario	Driver rated
Post Condition	None

21- Sign Out

Table 23: Sign Out

Use Case	Sign out
Goal	Sign out
Actor	Customer
Preconditions	None
Trigger	Click on Sign out button
Success Scenario	User signed out
Post Condition	The app has opened Sign in screen

2.4. Driver application use-cases

Driver application use-cases are made according to approved application features in chapter 1.3 and according to approved sketches files “Barq Driver Sketches.pdf”

1- Launch user application

Table 24: Launch user application

Use Case	Launch user application
Goal	Successfully loaded application on user device
Actor	Driver
Preconditions	None
Trigger	Platform specified
Success Scenario	Display application intro
Post Condition	None

2- Sign in

Table 25: Sign in

Use Case	Process sign in
Goal	Authenticate user on server
Actor	Driver
Preconditions	User phone exists, password matches
Trigger	Button “Login” pressed
Success Scenario	User authenticated
Post Condition	Display products catalog

3- Sign Up

Table 26: Sign Up

Use Case	Sign Up
Goal	Add a new entry to users database and required dependencies
Actor	Driver
Preconditions	Validate input fields
Trigger	Click on Sign Up button
Success Scenario	Create new necessary fields into database
Post Condition	Display app main page

4- Password reset

Table 27: Password reset

Use Case	Password reset
Goal	Reset user password
Actor	Driver
Preconditions	Email match user
Trigger	Button Forgot password clicked
Success Scenario	Change user password to random password and send it via email
Post Condition	Display alert “Password reset, check your email” and display Sign in page

5- Password change

Table 28: Password change

Use Case	Password Change
Goal	Change user password
Actor	Driver
Preconditions	Driver has been signed in , Password match
Trigger	Button Password change clicked
Success Scenario	Change user password to the new password typed by
Post Condition	Display alert “Password changed”

6- Edit profile

Table 29: Edit profile

Use Case	Edit profile
Goal	Edit profile
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button Edit profile clicked
Success Scenario	Save newly edited profile
Post Condition	Display new profile data

7- Edit profile photo

Table 30: **Edit profile photo**

Use Case	Edit profile photo
Goal	Edit profile photo
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button Edit photo clicked
Success Scenario	Save newly edited photo
Post Condition	Display new profile photo

8- View trips

Table 31: **View trips**

Use Case	View trips
Goal	View trips
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button View trips clicked
Success Scenario	Display trips
Post Condition	None

9- Filter trips

Table 32: **Filter trips**

Use Case	Filter trips
Goal	Filter trips
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Trips Filter selected
Success Scenario	Display trips
Post Condition	None

10- Accept order

Table 33: **Accept order**

Use Case	Accept order
Goal	Accept order
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Accept order button pressed
Success Scenario	Order accepted
Post Condition	None

11- View shipments

Table 34: **View shipments**

Use Case	View shipments
Goal	View shipments
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button View shipments clicked
Success Scenario	Display shipments
Post Condition	None

12- Track shipments

Table 35: **Track shipments**

Use Case	Track shipments
Goal	Track shipments
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button Track shipments clicked
Success Scenario	Display shipments
Post Condition	None

13- View past orders

Table 36: **View past orders**

Use Case	View past orders
Goal	View past orders
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button View past orders clicked
Success Scenario	Display past orders
Post Condition	None

14- Rate customer

Table 37: **Rate customer**

Use Case	Rate customer
Goal	Rate customer
Actor	Driver
Preconditions	Driver has been signed in , Shipment delivered
Trigger	Rate customer clicked
Success Scenario	Customer rated
Post Condition	None

15- Create trips

Table 38: Create trips

Use Case	Create trips
Goal	Create trips
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button Create trip clicked
Success Scenario	Display create trip details
Post Condition	None

16- Switch status online/offline

Table 39: Switch status online/offline

Use Case	Switch status online/offline
Goal	Switch status online/offline
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Switch status online/offline
Success Scenario	Status changed

Post Condition	The notifications not received by the driver, orders can not be accepted, driver trips are hidden for customers if driver is offline
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17- View past trips

Table 40: View past trips

Use Case	View past trips
Goal	View past trips
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button View past trips clicked
Success Scenario	Display past trips
Post Condition	None

18- View earnings

Table 41: View earnings

Use Case	View earnings
Goal	View earnings
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Button View earnings clicked
Success Scenario	Display earnings
Post Condition	None

19- Sign Out

Table 42: Sign out

Use Case	Sign out
Goal	Sign out
Actor	Driver
Preconditions	Driver has been signed in
Trigger	Click on Sign out button
Success Scenario	User signed out
Post Condition	The app has opened Sign in screen

2.5. Admin application use-cases

Admin application use-cases are made according to approved application features in chapter 1.3 and according to approved sketches files “Barq Admin sketches.pdf”

1- Open Web application

Table 43: Open web application

Use Case	Open web application
Goal	Successfully loaded web-site
Actor	Admin
Preconditions	None
Trigger	Platform specified

Success Scenario	Display application intro
Post Condition	None

2- Sign in

Table 44: Sign in

Use Case	Process sign in
Goal	Authenticate user on server
Actor	Admin
Preconditions	User phone exists, password matches
Trigger	Button “Login” pressed
Success Scenario	User authenticated
Post Condition	Display products catalog

3- Password reset

Table 45: Password reset

Use Case	Password reset
Goal	Reset user password
Actor	Admin
Preconditions	Email match user
Trigger	Button Forgot password clicked
Success Scenario	Change user password to random password and send it via email
Post Condition	Display alert “Password reset, check your email” and display Sign in page

4- Password change

Table 46: Password change

Use Case	Password Change
Goal	Change user password
Actor	Admin
Preconditions	Admin has been signed in, Password match
Trigger	Button Password change clicked
Success Scenario	Change user password to the new password typed by
Post Condition	Display alert “Password changed”

5- Activate/Deactivate driver

Table 47: Activate/Deactivate driver

Use Case	Activate/Deactivate driver
Goal	Activate/Deactivate driver
Actor	Admin
Preconditions	Admin has been signed in
Trigger	Button Activate/Deactivate clicked
Success Scenario	Driver Activated/Deactivated
Post Condition	The notifications not received by the driver, orders can not be accepted by the driver, driver trips are hidden for customers if driver is deactivated

6- Turn the system on/off

Table 48: Turn the system on/off

Use Case	Turn the system on/off
Goal	Turn the system on/off
Actor	Admin
Preconditions	Admin has been signed in
Trigger	Button Turn on/off clicked
Success Scenario	System turned on/off
Post Condition	The application stop working, does not accept orders, send explanation messages to every request if turned off

7- View/add/edit/hide customers

Table 49: View/add/edit/hide customers

Use Case	View/add/edit/hide customers
Goal	View/add/edit/hide customers
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/hide customers button pressed
Success Scenario	Changes applied
Post Condition	None

8- View/add/edit/hide drivers

Table 50: View/add/edit/hide drivers

Use Case	View/add/edit/hide drivers
Goal	View/add/edit/hide drivers
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/hide drivers button pressed
Success Scenario	Changes applied
Post Condition	None

9- View/add/edit/hide trips

Table 51: View/add/edit/hide trips

Use Case	View/add/edit/hide trips
Goal	View/add/edit/hide trips
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/hide trips button pressed
Success Scenario	Changes applied
Post Condition	None

10- View/add/edit/hide orders

Table 52: View/add/edit/hide orders

Use Case	View/add/edit/hide orders
Goal	View/add/edit/hide orders
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/hide orders button pressed
Success Scenario	Changes applied
Post Condition	None

11- View/add/edit/hide shipments

Table 53: View/add/edit/hide shipments

Use Case	View/add/edit/hide shipments
Goal	View/add/edit/hide shipments
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/hide shipments button pressed
Success Scenario	Changes applied
Post Condition	None

12- View/add/edit/delete cities

Table 54: View/add/edit/delete cities

Use Case	View/add/edit/delete cities
Goal	View/add/edit/delete cities
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/delete cities button pressed
Success Scenario	Changes applied
Post Condition	None

13- View/add/edit/delete administrators

Table 55: View/add/edit/delete administrators

Use Case	View/add/edit/delete administrators
Goal	View/add/edit/delete administrators
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/delete administrators button pressed
Success Scenario	Changes applied
Post Condition	None

14- View/add/edit/hide payments

Table 56: View/add/edit/hide payments

Use Case	View/add/edit/hide payments
Goal	View/add/edit/hide payments
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/add/edit/hide payments button pressed
Success Scenario	Changes applied
Post Condition	None

15- View reports

Table 57: View reports

Use Case	View reports
Goal	View reports
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View reports button pressed
Success Scenario	Changes applied
Post Condition	None

16- View/Edit settings

Table 58: **View/Edit settings**

Use Case	View/Edit settings
Goal	View/Edit settings
Actor	Admin
Preconditions	Admin has been signed in
Trigger	View/Edit settings button pressed
Success Scenario	Settings changes applied
Post Condition	None

17- Sign Out

Table 59: **Sign out**

Use Case	Sign out
Goal	Sign out
Actor	Admin
Preconditions	Admin has been signed in
Trigger	Click on Sign out button
Success Scenario	User signed out
Post Condition	The app has opened Sign in screen

3 System Design

This chapter presents the system design

3.1. System Architecture

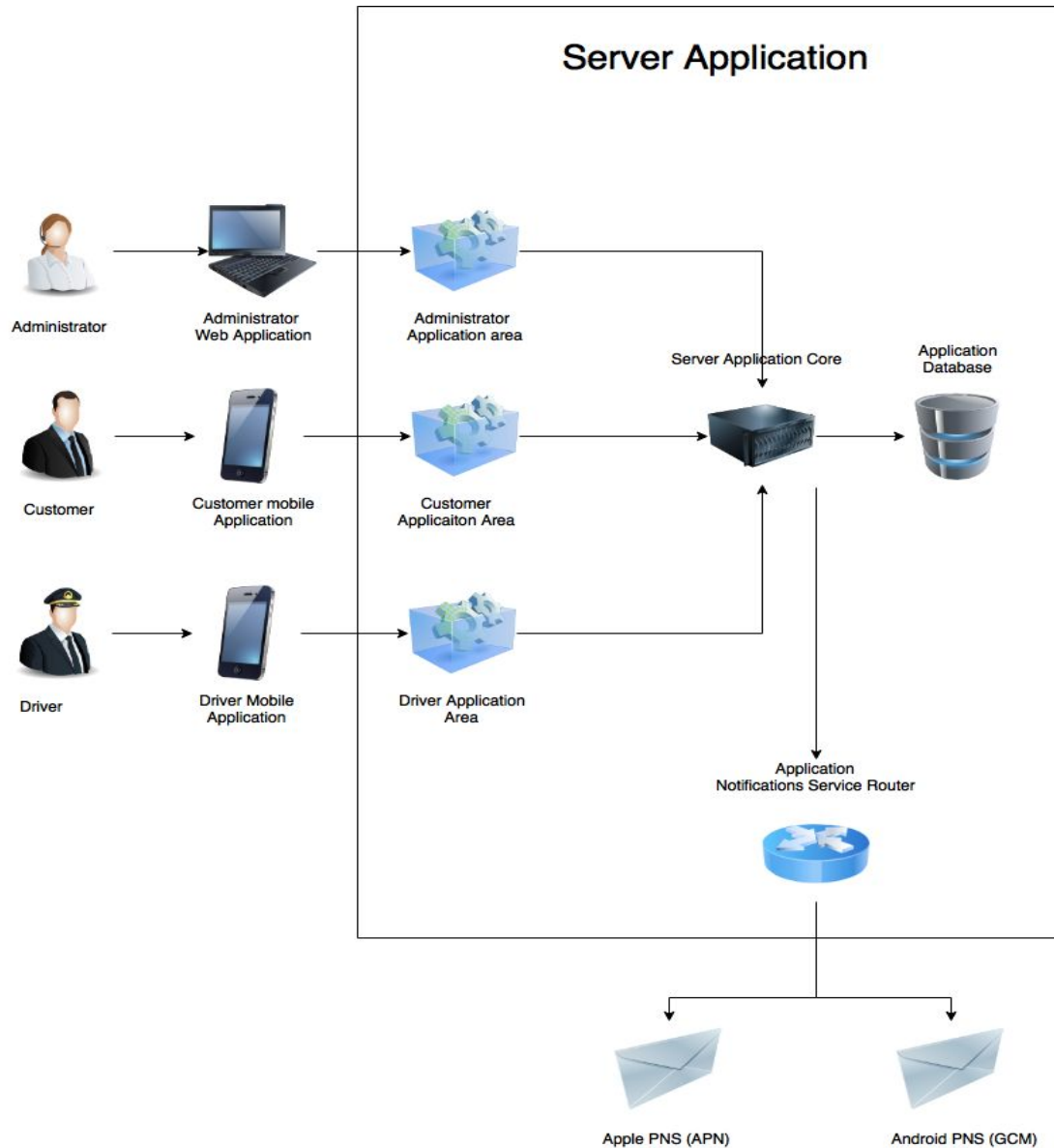


Figure 2: System Architecture

Based on the above flow chart, these different phases can be distinguished when using the application:

1. User makes some actions from mobile application or website
2. Any user action is processed with application backend compute unit
3. The application connects to the remote server application and performs the internal queries there.
4. The results passed back to the client; the results are trips, orders, personal data, settings data, etc.
5. On mobile/web applications requests, backend application queries database data, process database response and responds to mobile/web applications in JSON format
6. Customer operator connects via Customer mobile application
7. Driver operator connects via Driver mobile application
8. Administrator connects to Web Administrator Panel

3.2. Programming Language Choice

The following programming languages are involved in implementing the application:

- SWIFT for iOS
- JAVA for Android
- PHP for server functions, where JSON will be utilized especially in API.
- Laravel 5.1 as Backend server framework
- Amazon RDS PostgreSQL 9.4 as storage engine
- Sphinxsearch as Search Engine
- Amazon Elastic Beanstalk as hosting services

3.3. GUI Design Sketches

Approved sketches designs with main applications functionality description can be found in following documents:

- Barq Customer Sketches.pdf
- Barq Driver Sketches.pdf
- Barq Admin Sketches.pdf