



Group 48



AquaSpace

Group 48

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Meet the Team



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what is AquaSpace?



Problems

- Location-based web application for buying and selling fish and equipment
- The community of fish enthusiasts has been spread across several platforms
- Marketplaces do not provide the information needed to make the correct decision
- Lack of a centralized information centre for basic care instructions
- Adoption is not popular/ not known

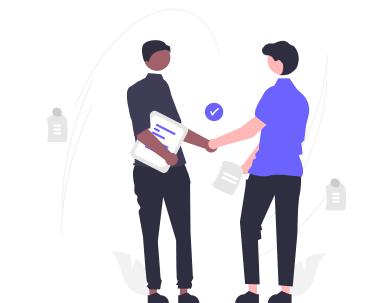
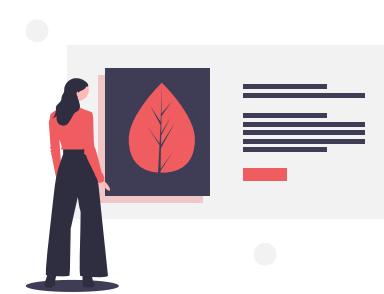
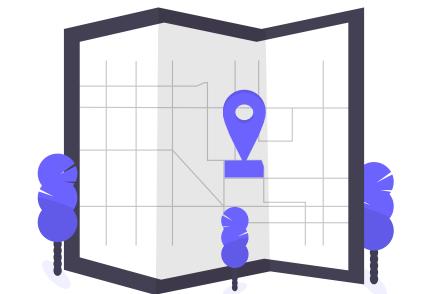
Project Goal



AquaSpace provides the community of fish enthusiasts and store owners with a platform that allows them to connect with each other easily and share information

Solutions

- Location-based web application for buying and selling fish and equipment
- A central knowledge base on basic care instructions
- Ask questions from experts based on a coin system
- Connect store owners with potential clients and help build a consumer base
- Promote adoption



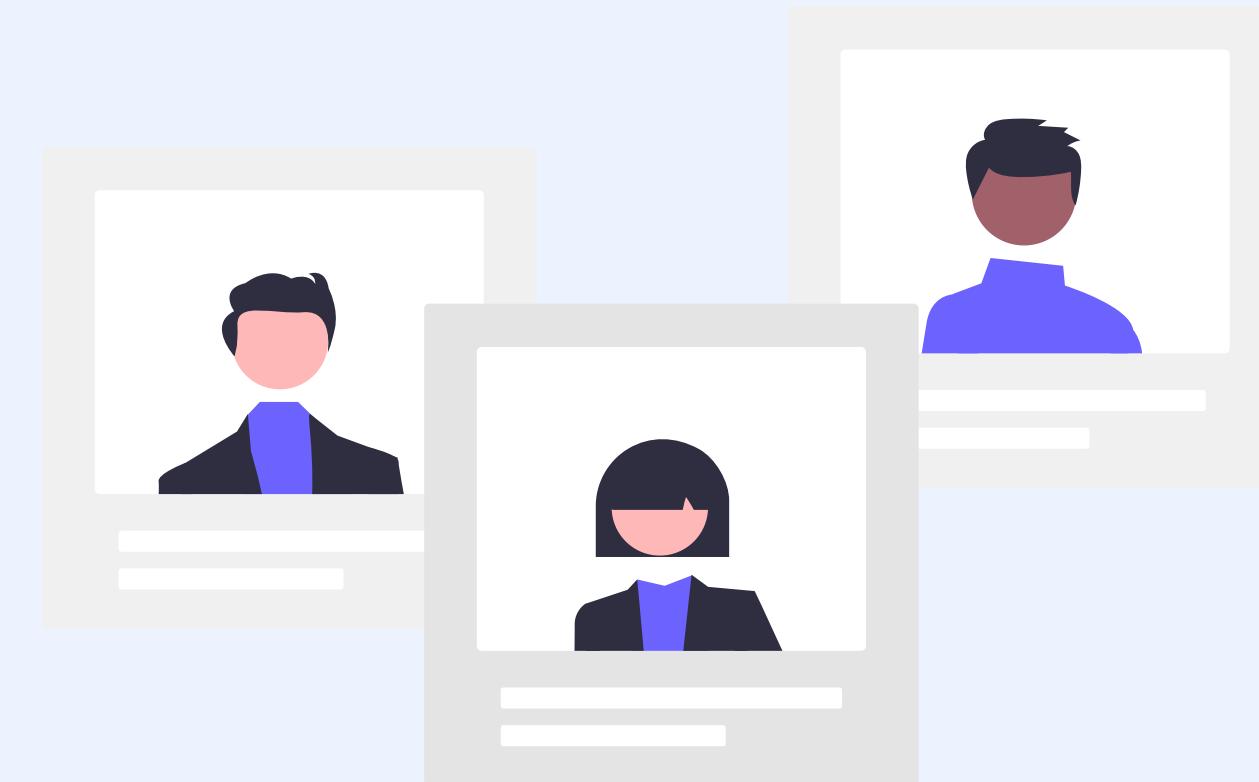
User Roles

01 Regular User

02 Store Owner

03 Verified Expert

04 Administrator

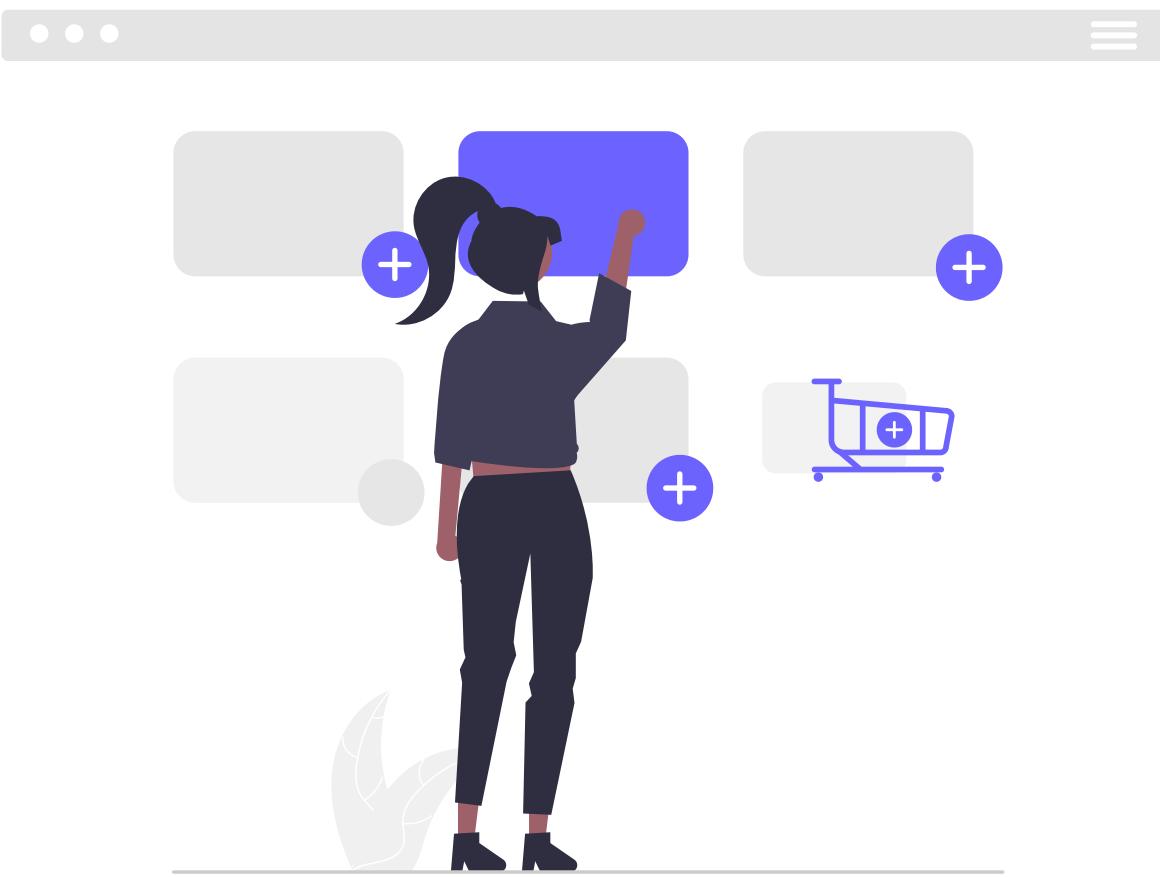




Functional Requirements

Regular User

- Add advertisements
- Browse and view blog section
- Post questions
- Guided tank building
- Buy products
- Rate and review products



Store Owner



- Add posts
- Sell products
- Handle orders
- Handle refund requests
- Manage inventory
- Report generation
- Reply to users' questions
- Delivery

Verified Expert

- Add fish data to the database
- Add articles to blog
- Verify posts
- Answer regular users' questions
- Handle posts related issues

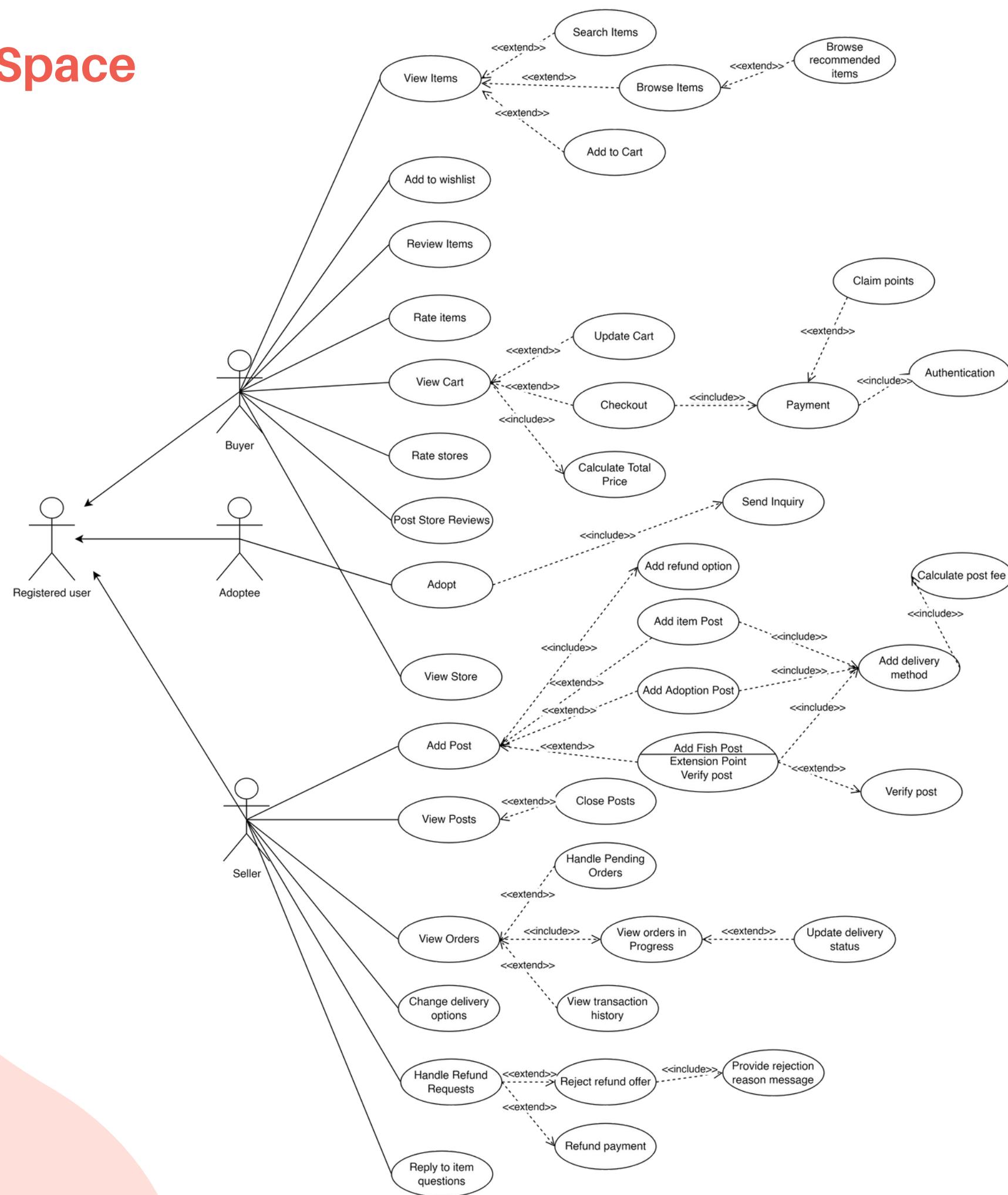


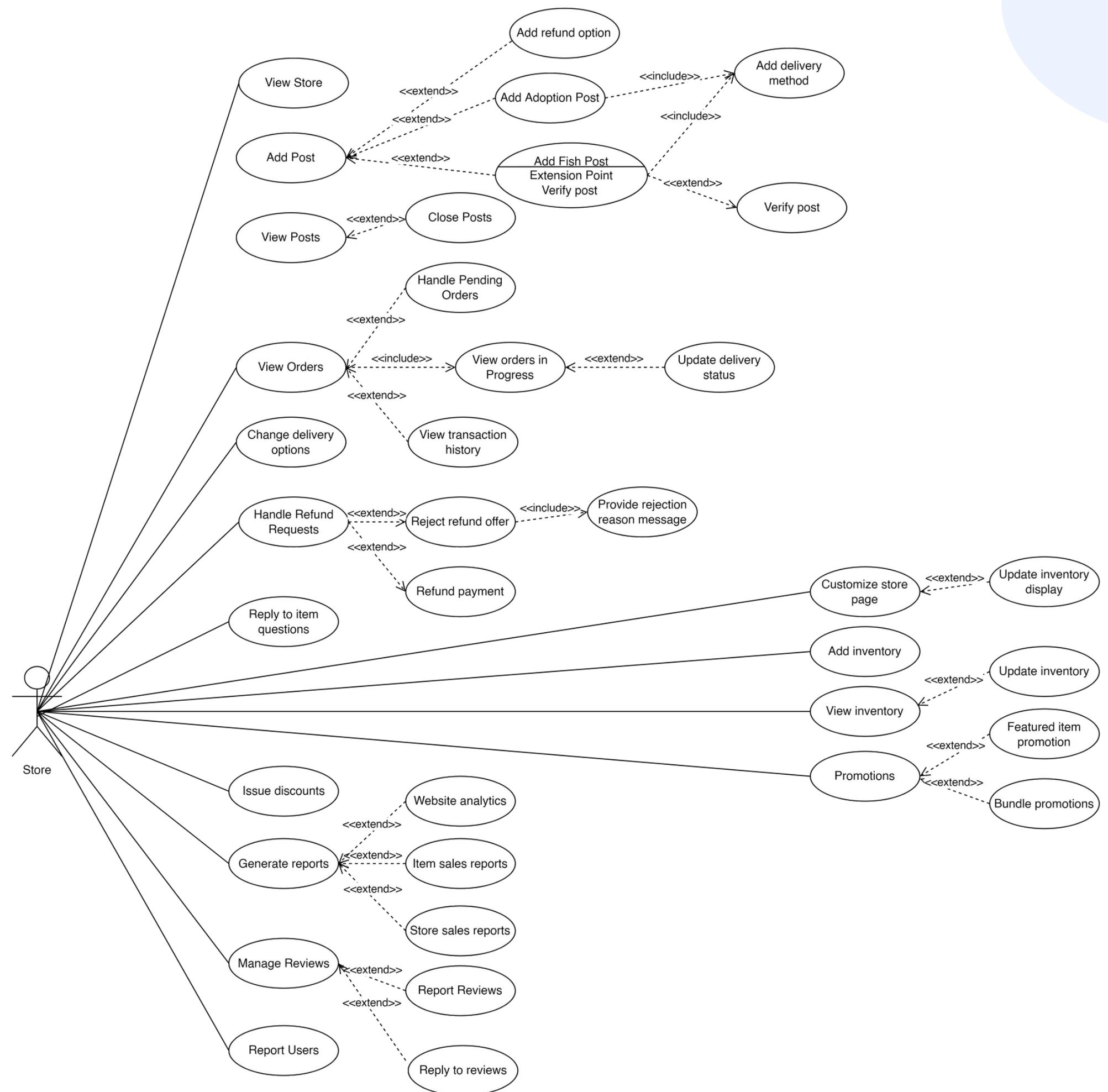
Admin

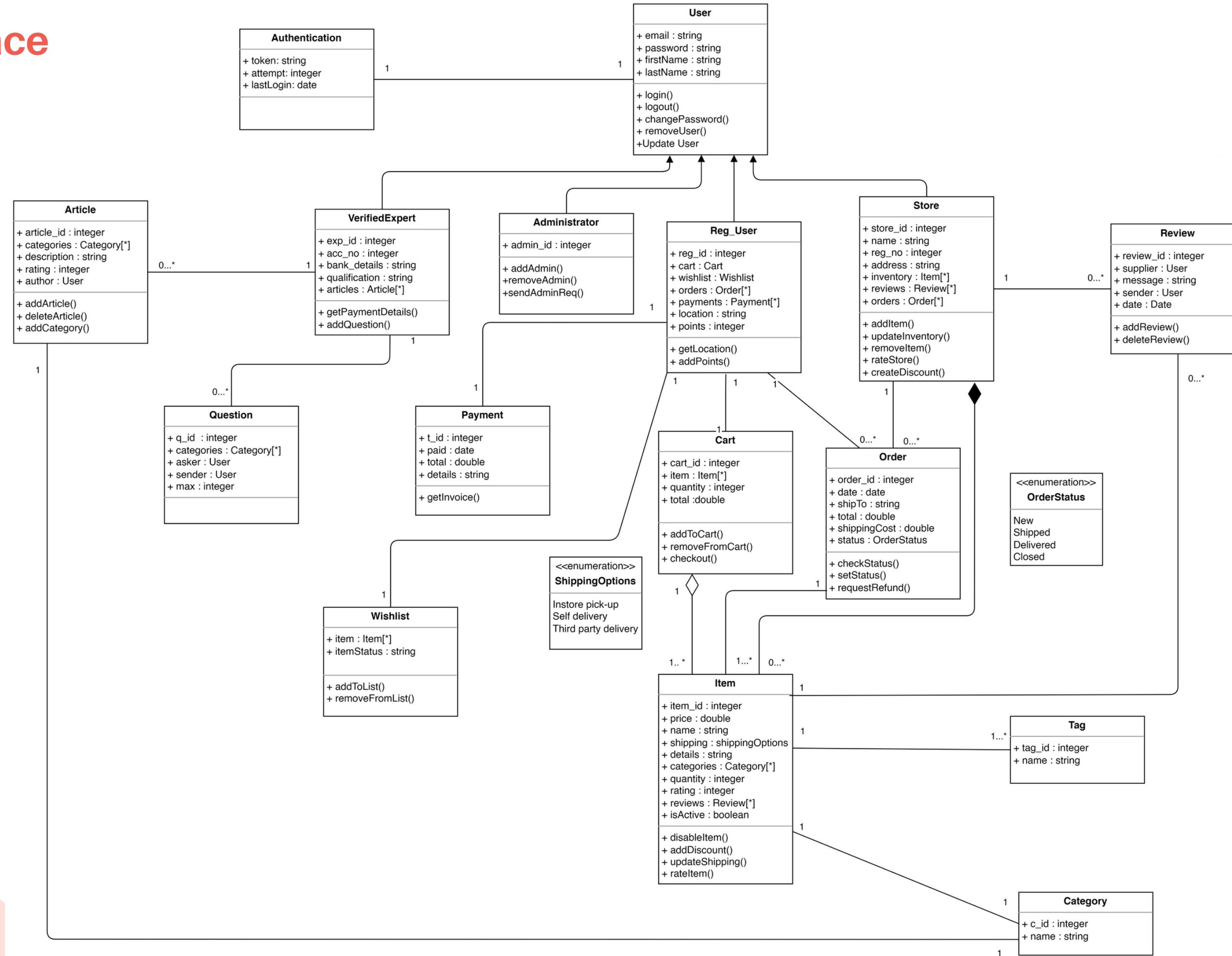


- Add admins to the system
- Verify expert accounts
- Verify store accounts
- Block or remove user accounts
- Report generation
- View expert contribution
- Approve payments for experts
- Change post rates









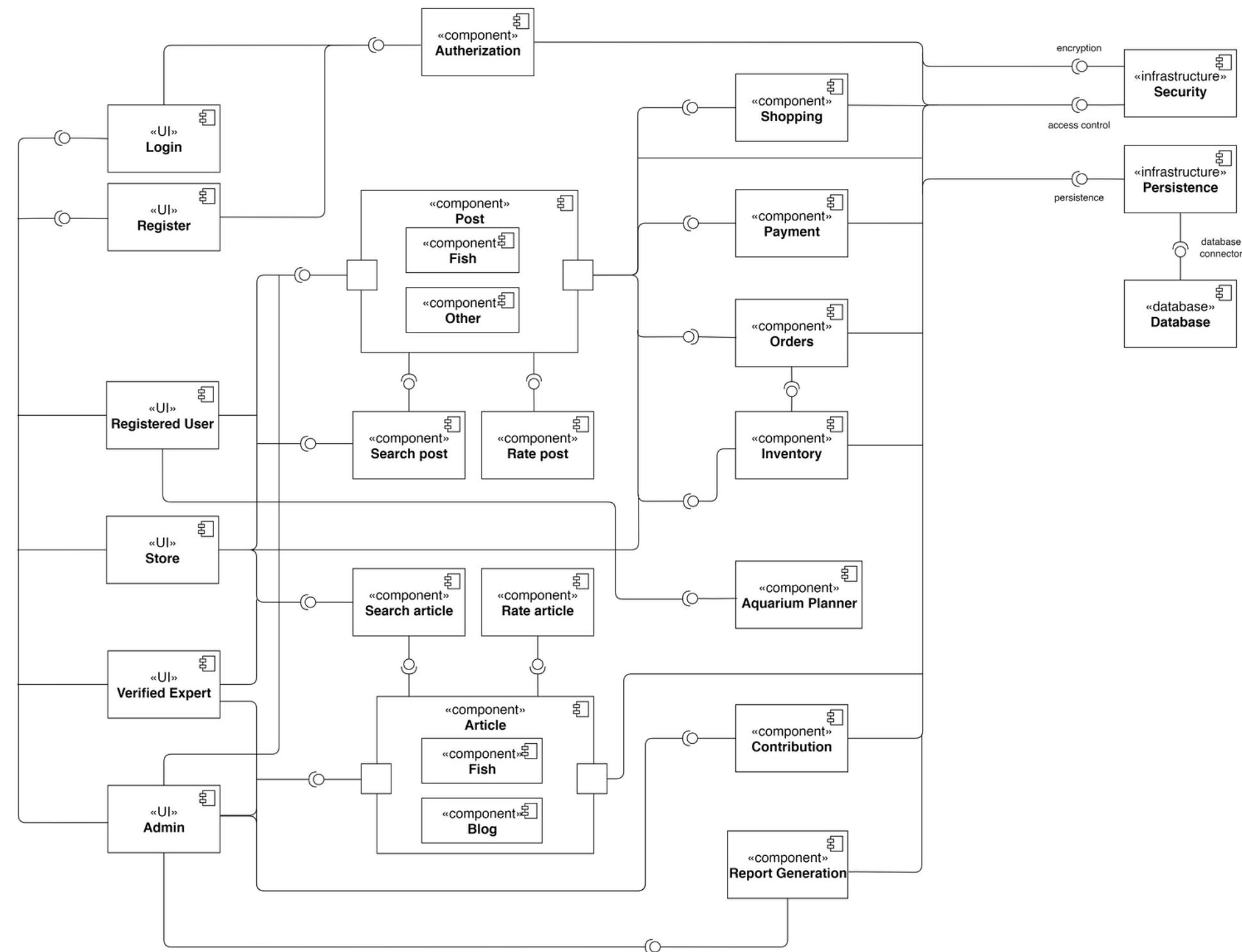
Feedback

- Delivery ranges were insufficient
 - Added more ranges for delivery service that covers the entire island
- Charging a percentage from each product sale was unfair for the store owners
 - Introduced a subscription method for store owner accounts
- Consider the size and the type of product when charging for delivery
 - Add more options for delivery other than the weight of the item

Feedback

- Taking the distance of the straight line between two points is not practical
 - Used Google Map Directions API to get the distance of the actual route
- Store accounts adding products as collections
 - Introduced a subscription method for store owner accounts
- Notify the users when their advertisement reaches its expiry date
- Made changes to the user interfaces

System Architecture

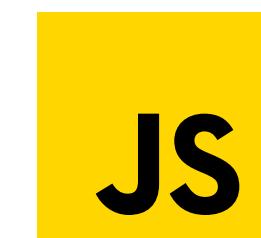




Technologies



Frontend



Backend



AquaSpace Rest API

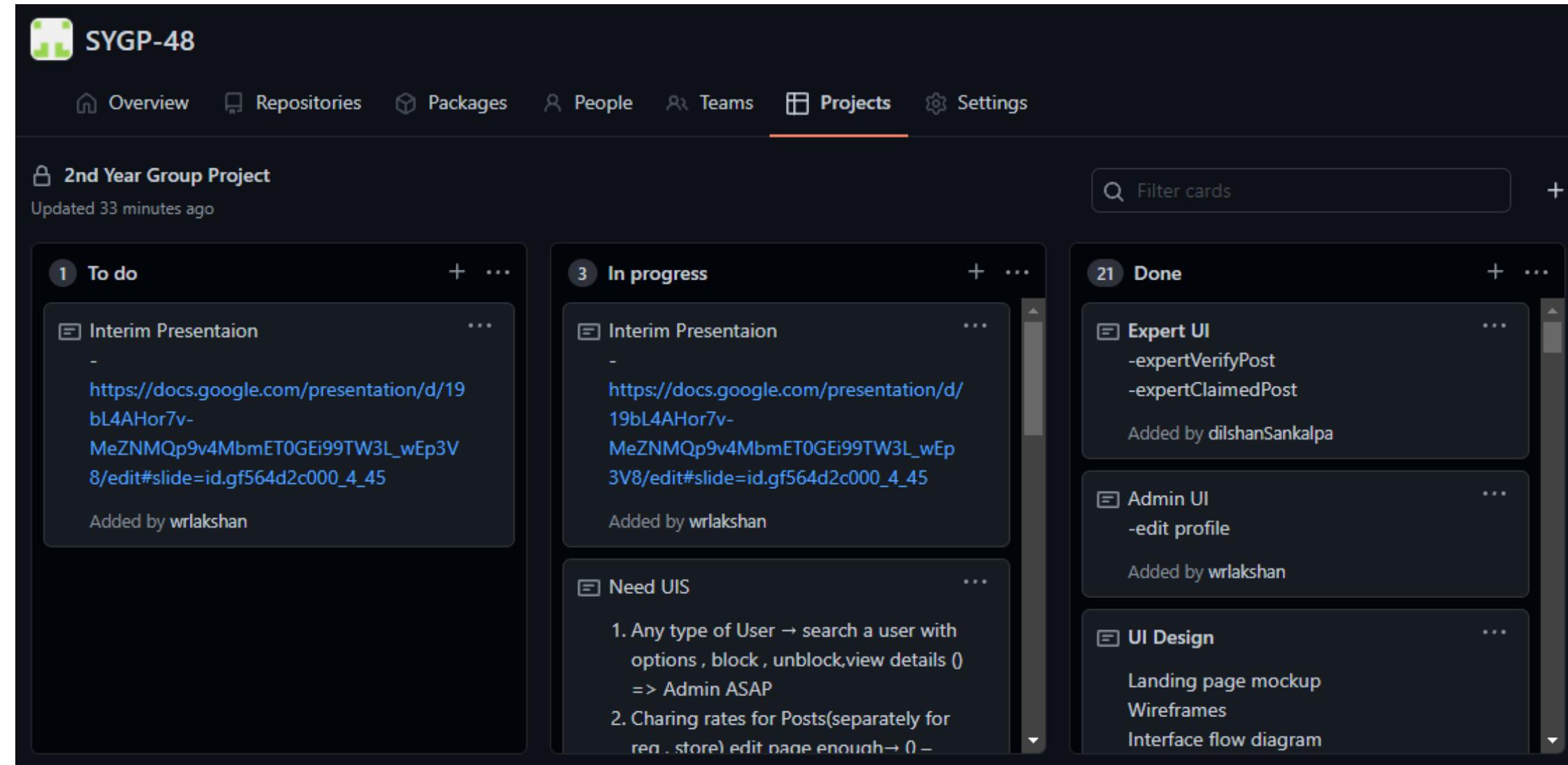
Third party APIs



Google Maps



Version Controlling using git and github organization as the collaboration tool



The screenshot shows a GitHub organization named "SYGP-48" with a project titled "2nd Year Group Project". The project board has three columns: "To do", "In progress", and "Done".

- To do:** 1 item: "Interim Presentaion" with a link to a Google Slides presentation.
- In progress:** 3 items: "Interim Presentaion" (with the same link), "Need UIS" (with a list of tasks: 1. Any type of User → search a user with options , block , unblock,view details () => Admin ASAP, 2. Charing rates for Posts(separately for rea . store) edit page enough→ 0 –), and "UI Design" (with tasks: Landing page mockup, Wireframes, Interface flow diagram).
- Done:** 21 items: "Expert UI" (with sub-tasks: -expertVerifyPost, -expertClaimedPost), "Admin UI" (with sub-task: -edit profile), and "UI Design" (with sub-tasks: Landing page mockup, Wireframes, Interface flow diagram). One card in the "Done" column was added by "dilshanSankalpa".

Quality Assurance

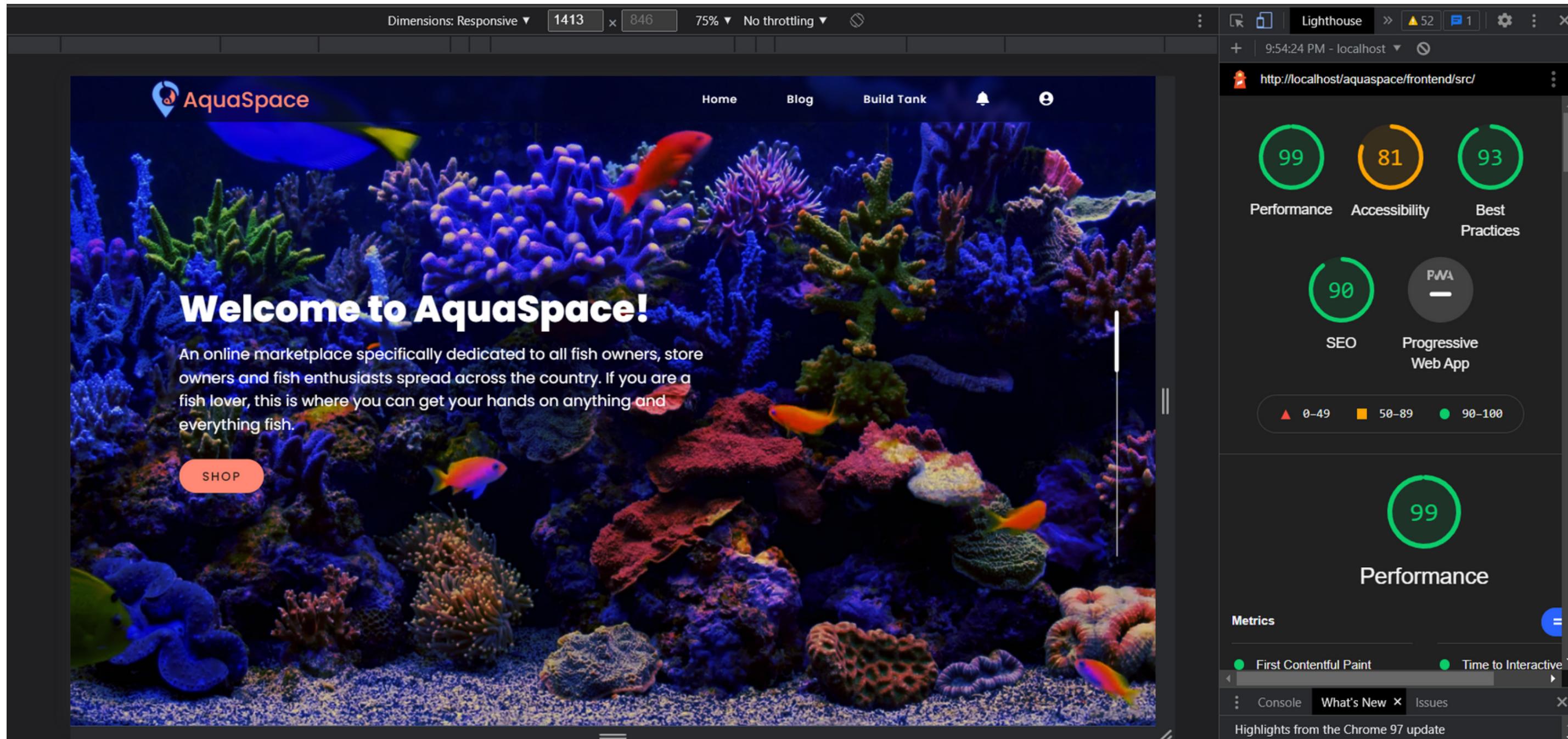


```
└─ AQUASPACE
    ├ .vscode
    └─ backend
        ├ App
        │   ├ Controllers
        │   └ Config.php
        └ Core
            └ Controller.php
            └ Error.php
            └ Model.php
            └ Router.php
            └ Token.php
            └ View.php
        └ log
        └ public
        └ vendor
    └ composer.json
    └ composer.lock
    └ frontend
```

Enhanced security and ease of modification using modularity with the help of the custom made MVC framework

Well organized folder structure makes it easier for the new developers to understand the codebase.

User friendly interfaces and easy navigation



The screenshot shows the AquaSpace website's homepage on the left and its Lighthouse performance audit results on the right.

AquaSpace Homepage:

- Dimensions: Responsive (1413 x 846), 75% No throttling.
- Header: Home, Blog, Build Tank, Notifications, User icon.
- Background: A vibrant coral reef aquarium.
- Text: "Welcome to AquaSpace!"
- Text: "An online marketplace specifically dedicated to all fish owners, store owners and fish enthusiasts spread across the country. If you are a fish lover, this is where you can get your hands on anything and everything fish."
- Button: SHOP.

Lighthouse Audit Results:

- Overall score: 99.
- Performance: 99 (Green).
- Accessibility: 81 (Yellow).
- Best Practices: 93 (Green).
- SEO: 90 (Green).
- Progressive Web App: PWA - (Grey).
- Metrics (Performance):
 - First Contentful Paint: 0-49 (Green)
 - Time to Interactive: 50-89 (Yellow)
- Metrics (SEO):
 - Console: Issues (Grey)
 - What's New: X (Grey)
 - Issues: X (Grey)
- Notes: Highlights from the Chrome 97 update.

Dimensions: Responsive ▾ 1413 x 846 75% ▾ No throttling ▾

Lighthouse 45 1 9:56:12 PM - localhost http://localhost/aquaspace/frontend/src/Store/St...

INVENTORY

Product Name	Type	Price	Quantity	Status		
Red Discus	Fish	Rs 250.00	25	Sell	Edit	Delete
Black Angelfish	Fish	Rs 456.25	2	Sell	Edit	Delete
Green Plant	Plant	Rs 250.00	20	Sell	Edit	Delete
Koi Karf	Fish	Rs 250.00	50	Not Selling	Edit	Delete

Performance: 44 Accessibility: 77 Best Practices: 93

SEO: 80 PWA: -

Performance: 44

Metrics: First Contentful Paint, Time to Interactive

Console, What's New, Issues

Highlights from the Chrome 97 update

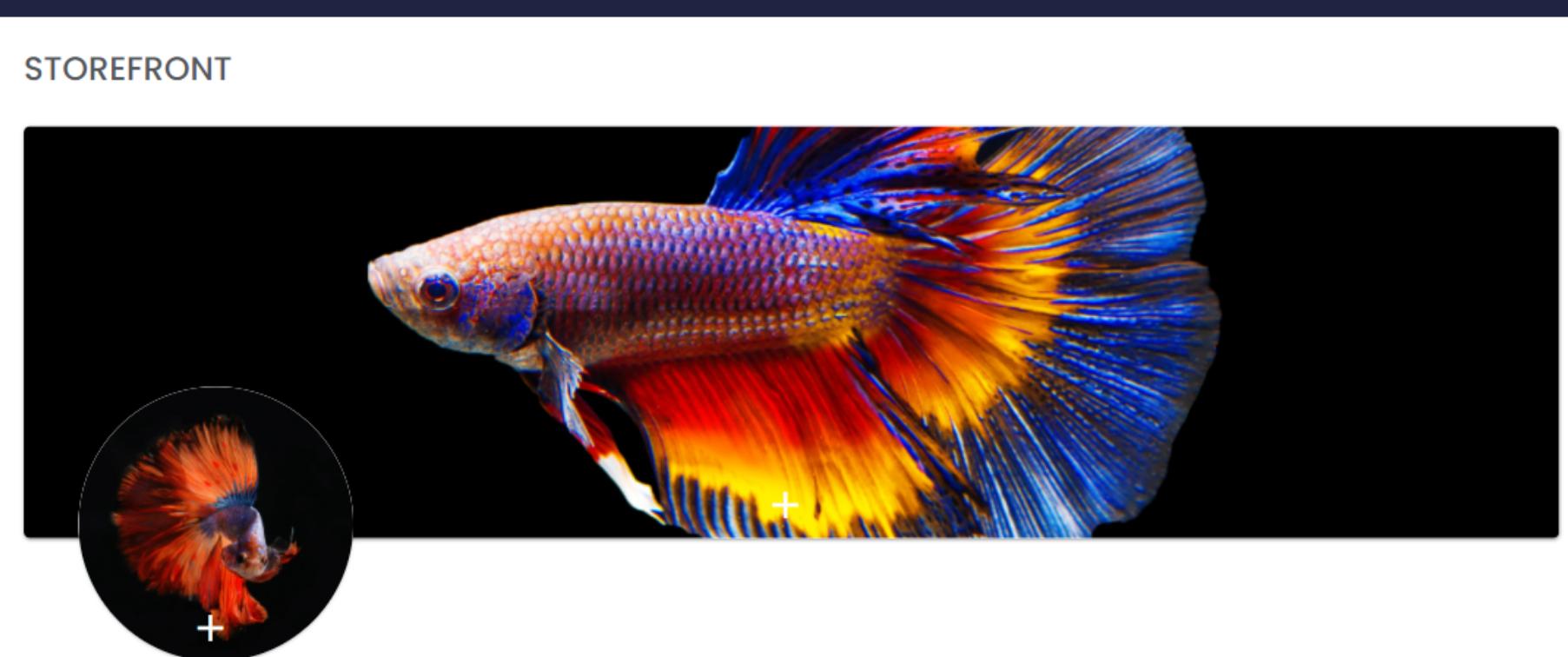
Dimensions: Responsive ▾ 1413 x 846 75% ▾ No throttling ▾

Lighthouse 9:57:10 PM - localhost http://localhost/aquaspace/frontend/src/Store/St...

Performance Accessibility Best Practices SEO Progressive Web App

Metrics First Contentful Paint Time to Interactive

Console What's New Issues Highlights from the Chrome 97 update



STOREFRONT

FishShop member since 2021-10-30
NO 07 GALLINDAHENA WATTHA NARAWELPITA WEST

About the store

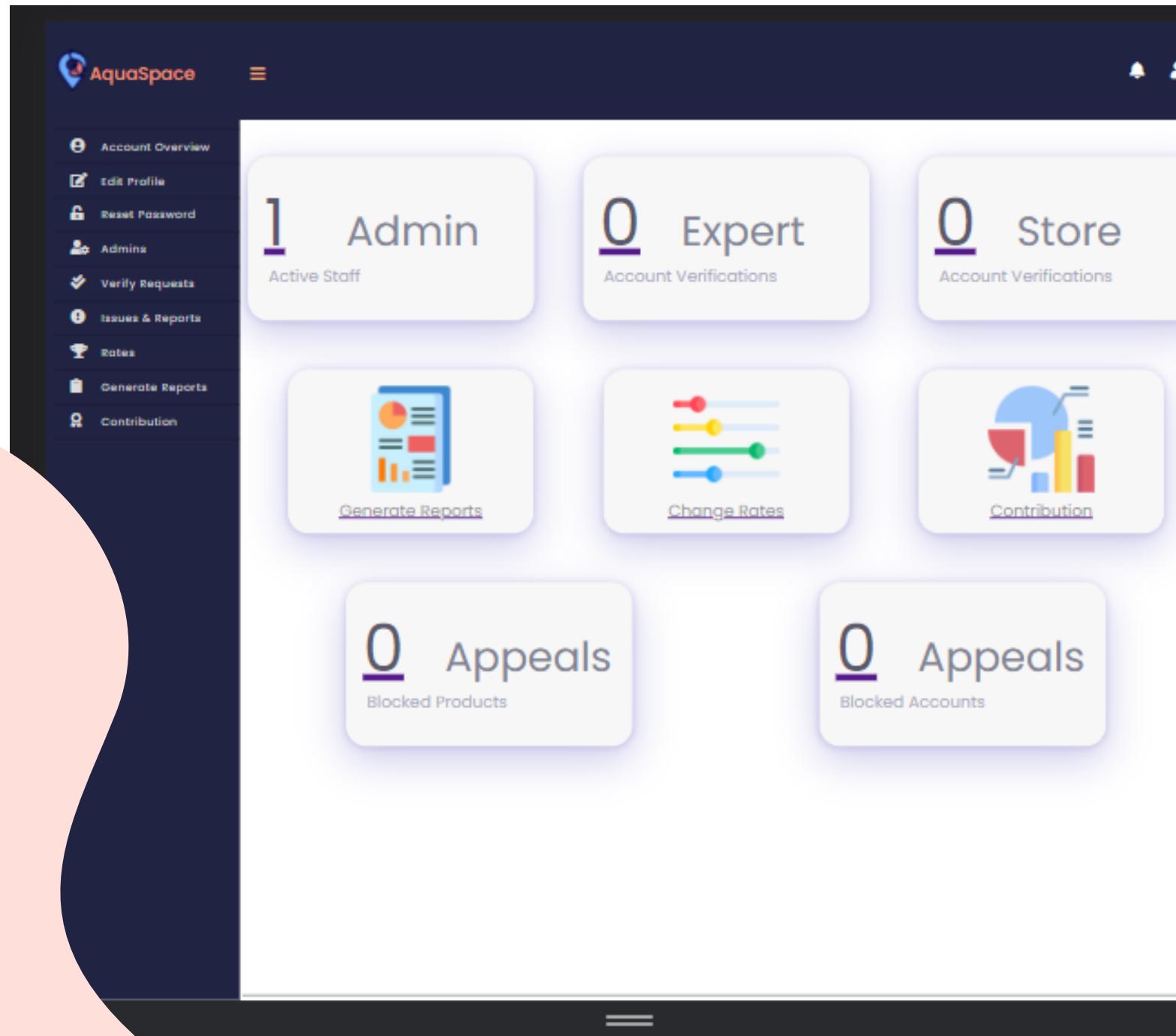
Fish Shop one-stop-shop for all your home aquarium requirements.

Store Items Edit SAVE

78 68 93

80 PWA

78 Performance



The screenshot shows the AquaSpace Admin Home dashboard. On the left, a sidebar lists navigation items: Account Overview, Edit Profile, Reset Password, Admins, Verify Requests, Issues & Reports, Rates, Generate Reports, and Contribution. The main area displays six cards:

- Admin**: Active Staff (1)
- Expert**: Account Verifications (0)
- Store**: Account Verifications (0)
- Appeals**: Blocked Products (0)
- Appeals**: Blocked Accounts (0)
- Contribution**: (Icon showing a bar chart and a pie chart)

Below the cards are links for "Generate Reports", "Change Rates", and "Contribution".

http://127.0.0.1/aquaspace/frontend/src/Admin/AdminHome.html



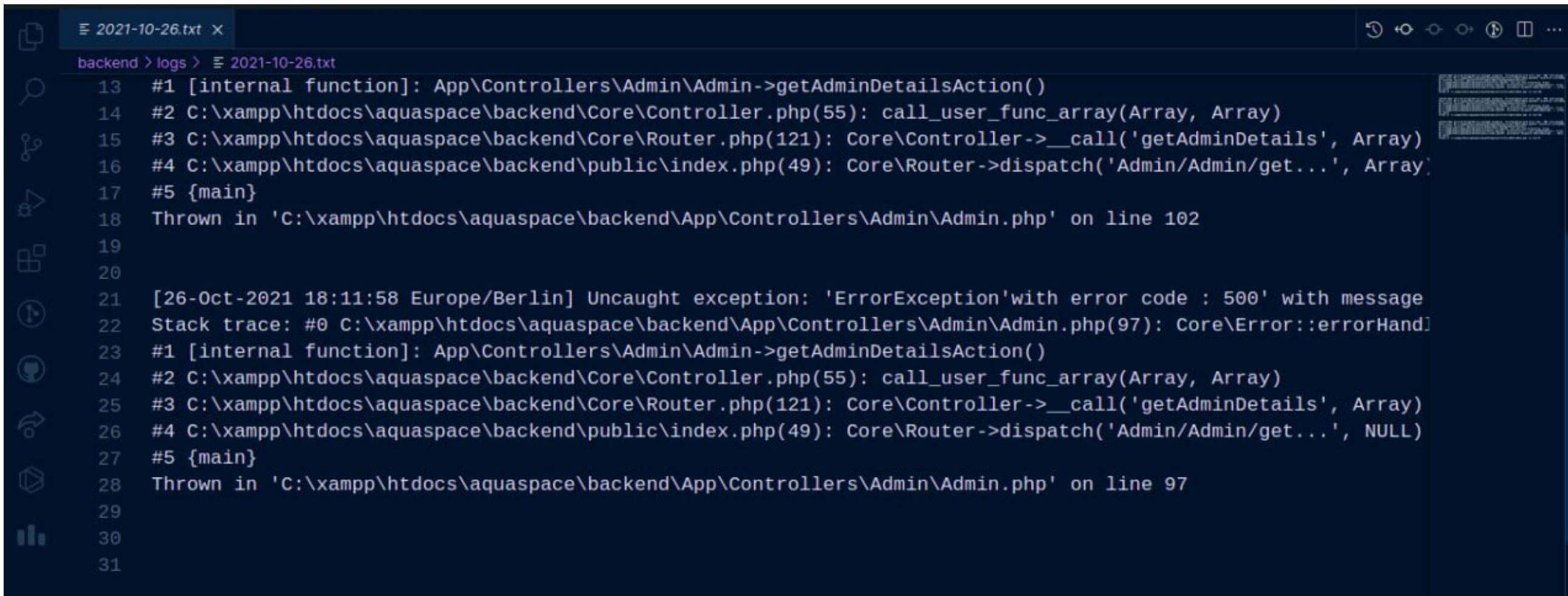
The screenshot shows a performance analysis tool with the URL http://127.0.0.1/aquaspace/frontend/src/Admin/AdminHome.html. It displays five circular progress indicators:

- Performance: 99 (Green)
- Accessibility: 70 (Yellow)
- Best Practices: 93 (Green)
- SEO: 70 (Yellow)
- PWA: - (Grey)

A legend below the indicators indicates color coding: Red for 0-49, Yellow for 50-89, and Green for 90-100. The "Performance" section is expanded, showing detailed metrics:

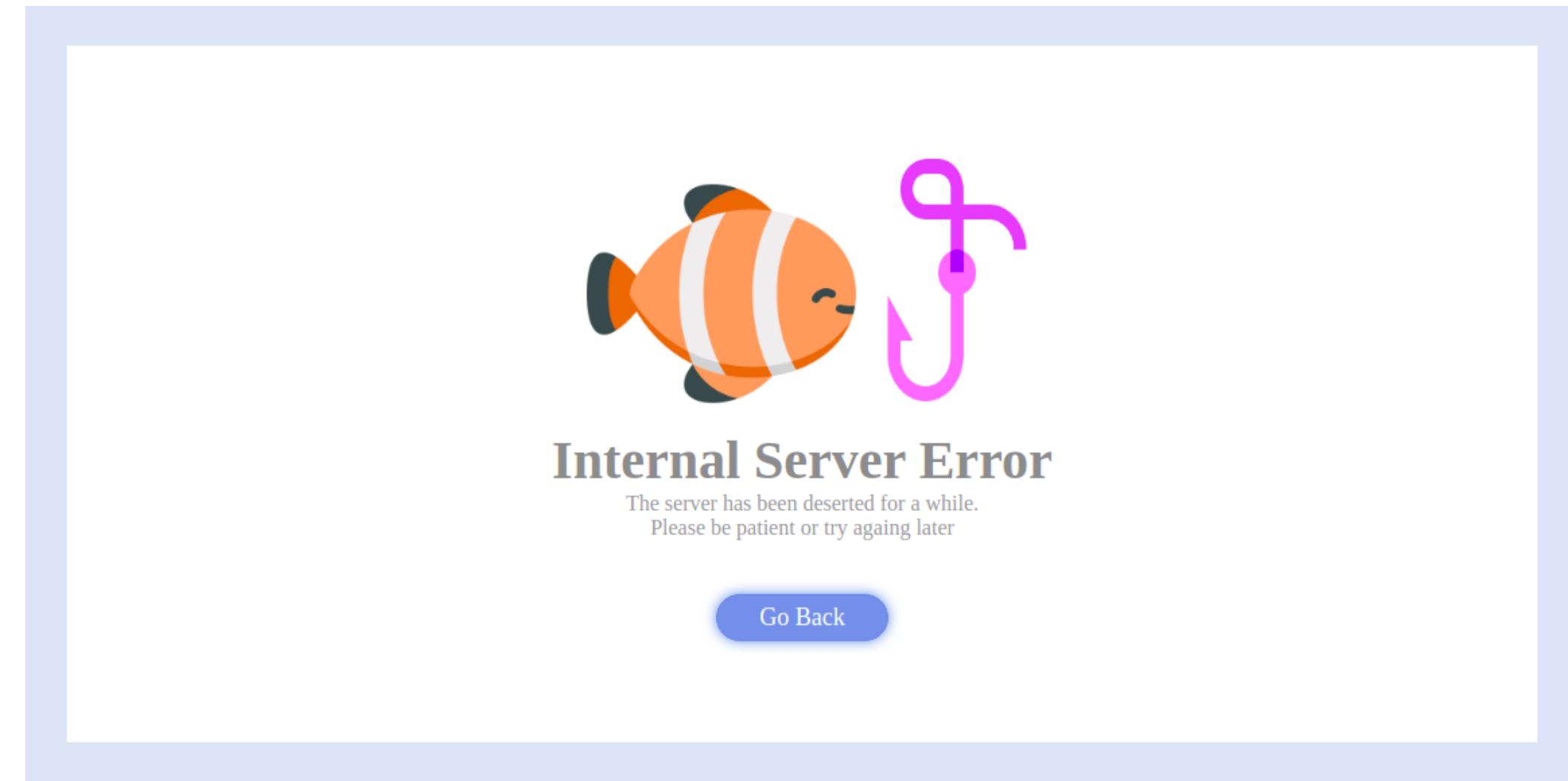
Metrics	Value
First Contentful Paint	0.8 s
Time to Interactive	0.8 s
Speed Index	1.0 s
Total Blocking Time	0 ms

Log system for server side errors



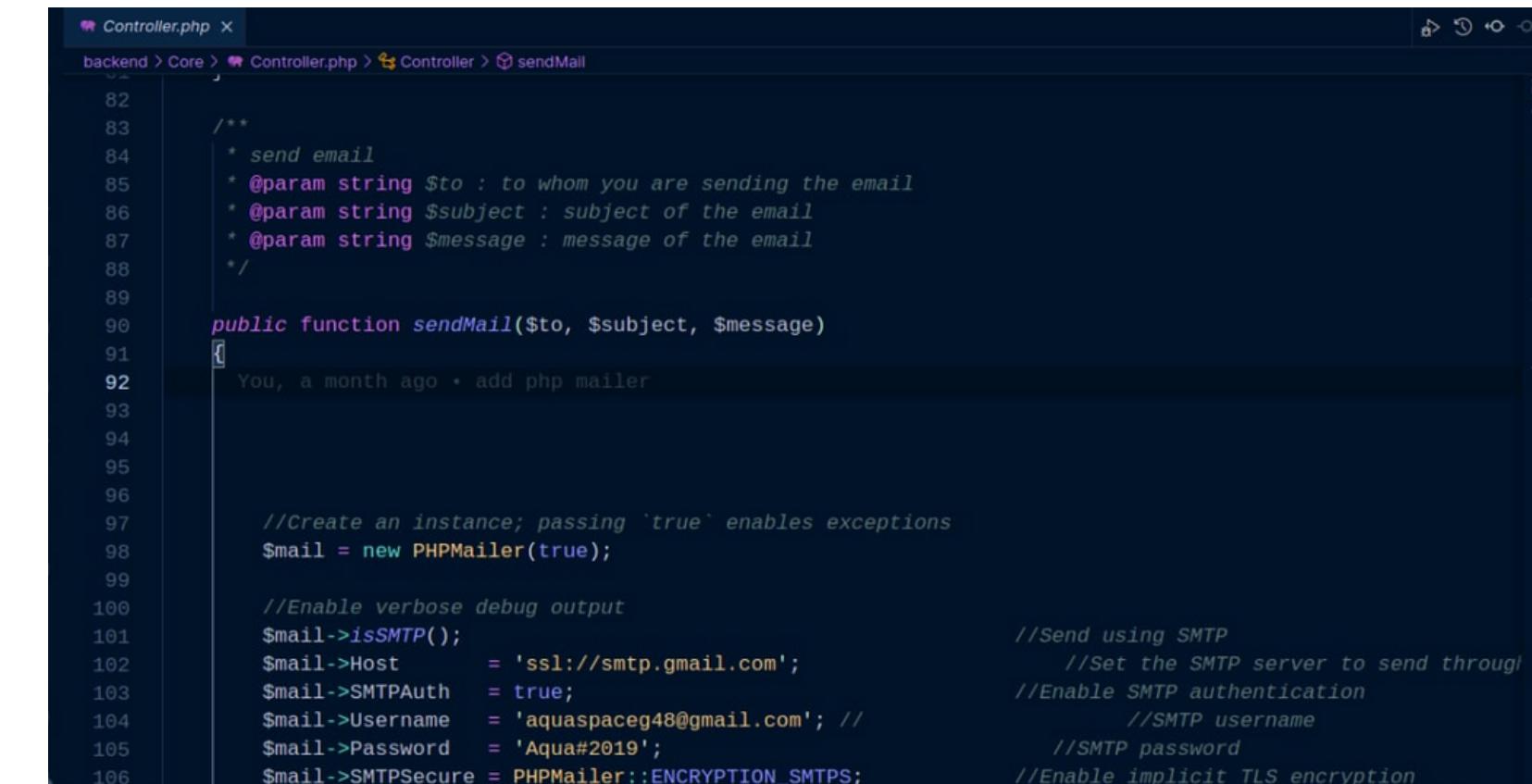
```
backend > logs > 2021-10-26.txt
13 #1 [internal function]: App\Controllers\Admin\Admin->getAdminDetailsAction()
14 #2 C:\xampp\htdocs\aquaspace\backend\Core\Controller.php(55): call_user_func_array(Array, Array)
15 #3 C:\xampp\htdocs\aquaspace\backend\Core\Router.php(121): Core\Controller->__call('getAdminDetails', Array)
16 #4 C:\xampp\htdocs\aquaspace\backend\public\index.php(49): Core\Router->dispatch('Admin/Admin/get...', Array)
17 #5 {main}
18 Thrown in 'C:\xampp\htdocs\aquaspace\backend\App\Controllers\Admin\Admin.php' on line 102
19
20
21 [26-Oct-2021 18:11:58 Europe/Berlin] Uncaught exception: 'ErrorException' with error code : 500' with message
22 Stack trace: #0 C:\xampp\htdocs\aquaspace\backend\App\Controllers\Admin\Admin.php(97): Core\Error::errorHand
23 #1 [internal function]: App\Controllers\Admin\Admin->getAdminDetailsAction()
24 #2 C:\xampp\htdocs\aquaspace\backend\Core\Controller.php(55): call_user_func_array(Array, Array)
25 #3 C:\xampp\htdocs\aquaspace\backend\Core\Router.php(121): Core\Controller->__call('getAdminDetails', Array)
26 #4 C:\xampp\htdocs\aquaspace\backend\public\index.php(49): Core\Router->dispatch('Admin/Admin/get...', NULL)
27 #5 {main}
28 Thrown in 'C:\xampp\htdocs\aquaspace\backend\App\Controllers\Admin\Admin.php' on line 97
29
30
31
```

User friendly error handling - end users cannot see the server side errors



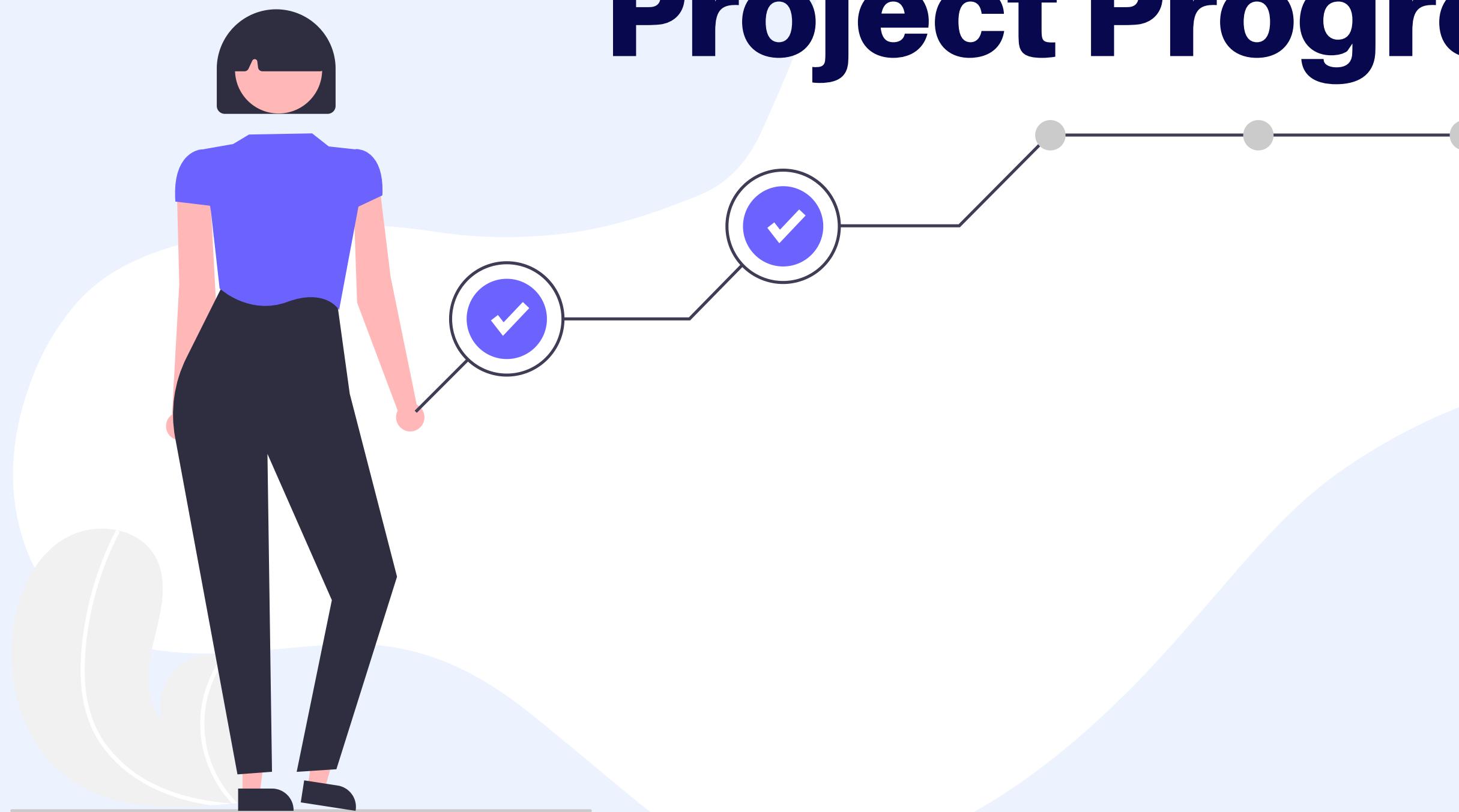
Using comments, indentation and naming conventions when coding enhances the clarity and consistency of the code base.

- Camel case for naming variables
- Snake case for naming tables in the db
- Study case for naming files

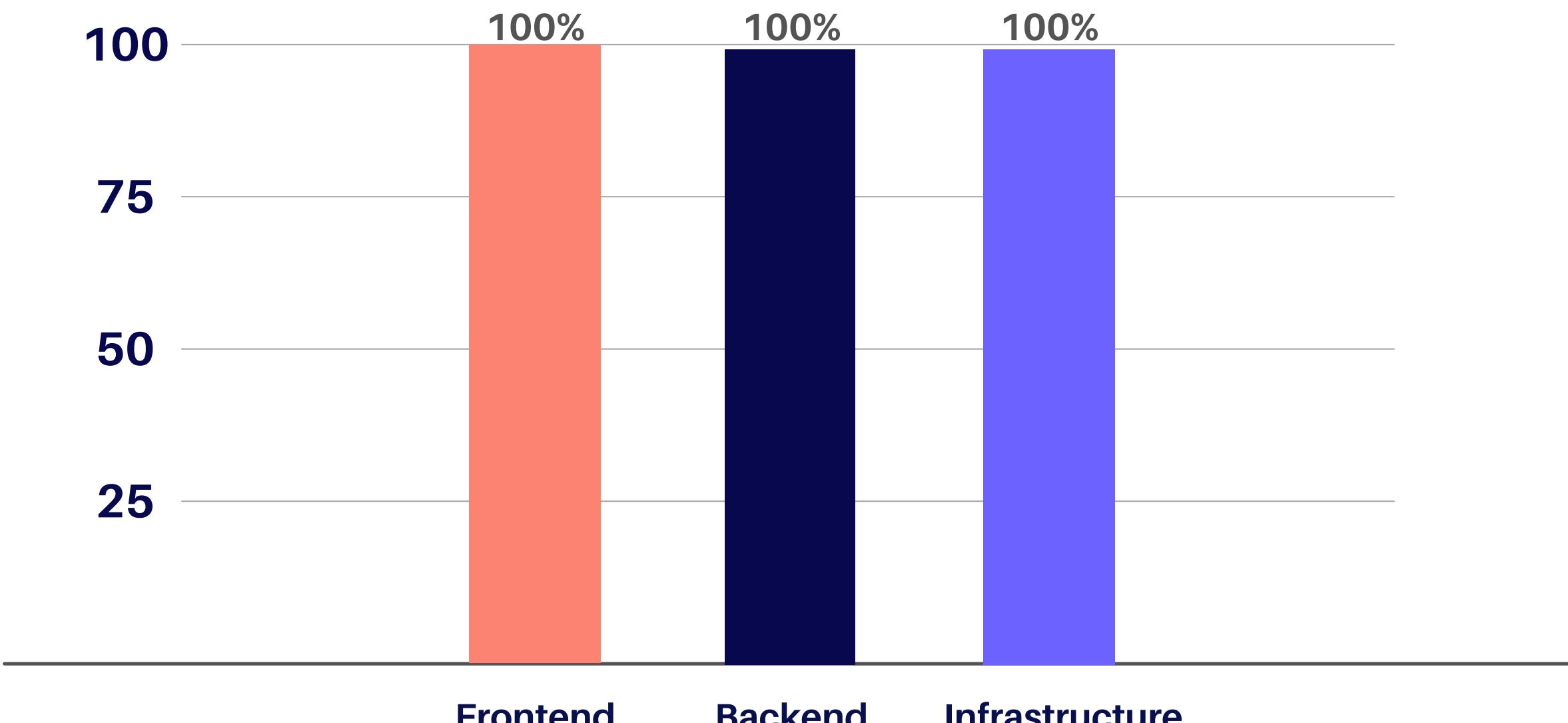


```
Controller.php x
backend > Core > Controller.php > Controller > sendMail
82
83     /**
84      * send email
85      * @param string $to : to whom you are sending the email
86      * @param string $subject : subject of the email
87      * @param string $message : message of the email
88      */
89
90     public function sendMail($to, $subject, $message)
91     {
92         You, a month ago • add php mailer
93
94
95
96
97         //Create an instance; passing 'true' enables exceptions
98         $mail = new PHPMailer(true);
99
100        //Enable verbose debug output
101        $mail->isSMTP();
102        $mail->Host      = 'ssl://smtp.gmail.com';           //Send using SMTP
103        $mail->SMTPAuth  = true;                            //Set the SMTP server to send through
104        $mail->Username   = 'aquaspace48@gmail.com';        //Enable SMTP authentication
105        $mail->Password   = 'Aqua#2019';                   //SMTP username
106        $mail->SMTPSecure = PHPMailer::ENCRYPTION_SMTPS;    //SMTP password
107        $mail->SMTPSecure = PHPMailer::ENCRYPTION_SMTPS;    //Enable implicit TLS encryption
```

Project Progress



Progress



Approximated data on the project progress

Testing

- Testing for the authentication system
- Testing on user registration and login validation
- Testing database connectivity
- Manual testing was carried out for all components

Test Case No	01		
Description	User login		
Test Data	Expected Results	Actual Result	Pass/Fail
email:dilshansankalp a98@gmail.com password: Admin@123	login as a Admin	login as a admin	Pass
mail.com password:Store@123			
email: kalshasamarajeewa@gmail.com password:Reg@123	login as a regular user	login as a regular user	pass
email: dil@gmail.com password:Expert@123	login as a expert	login as a expert	pass
email: wrong@gmail.com password:wrong@123	show the login error	show the login error	pass

Test Case No	02		
Description	Add Fish post		
Test Data	Expected Results	Actual Result	Pass/Fail
Fill all the required fields in the form (select one of the suggested fish names)	Show "post successfully added" popup message	Show "post successfully added" popup message	Pass
Fill all the required fields in the form (select a fish name which is not present in the database)	Show "post successfully added" popup message	Show "post has been sent for verification"	Pass <input checked="" type="checkbox"/>

Workload Distribution

Dilshan Sankalpa

- Administrator
- Verified expert

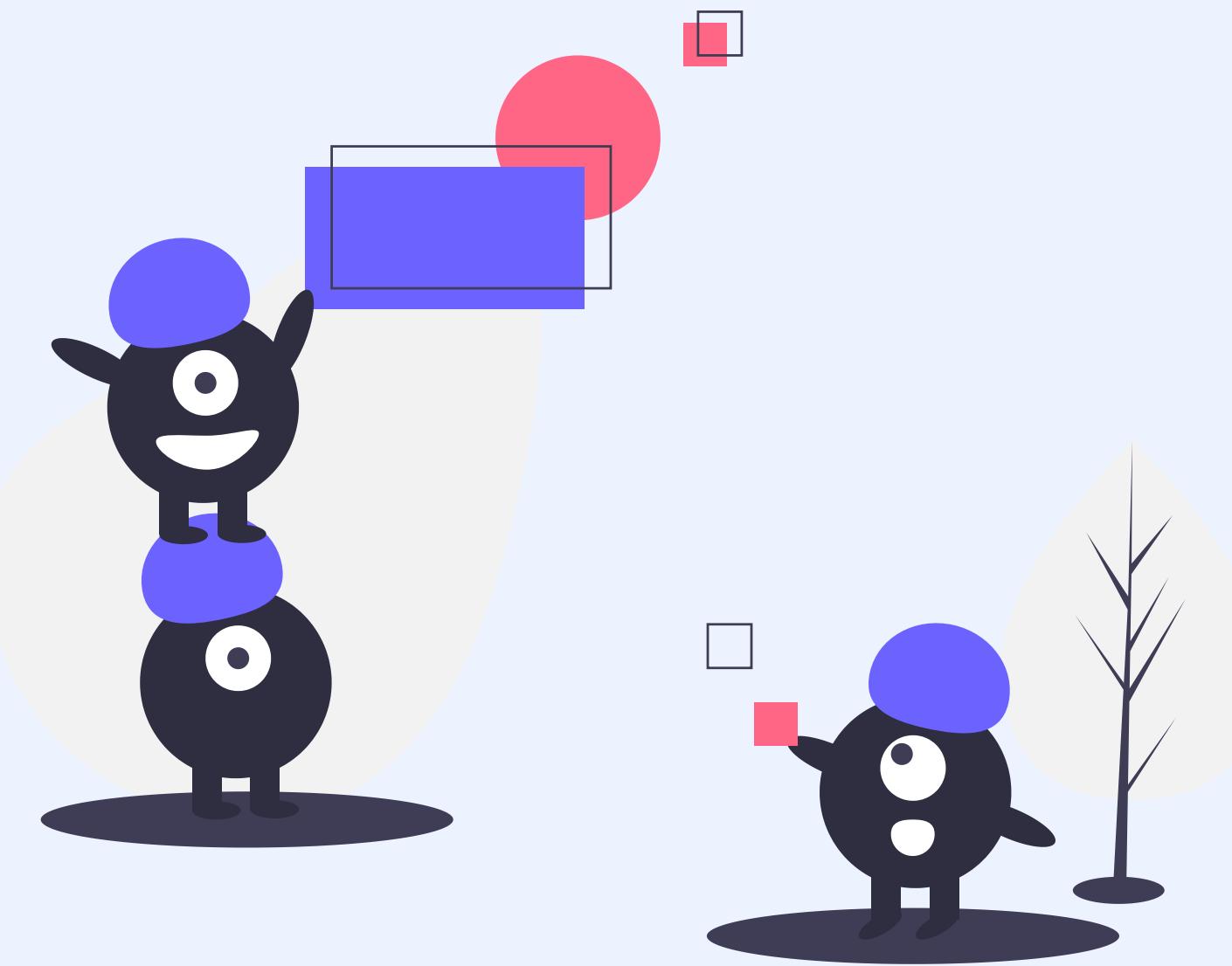
Kalsha Samarajeewa

- Regular user
- Verified expert

Rashmika Lakshan

- Store owner
- Verified expert

Demonstration





**THANK
YOU**