



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

CBS1005 Software Engineering Methodologies

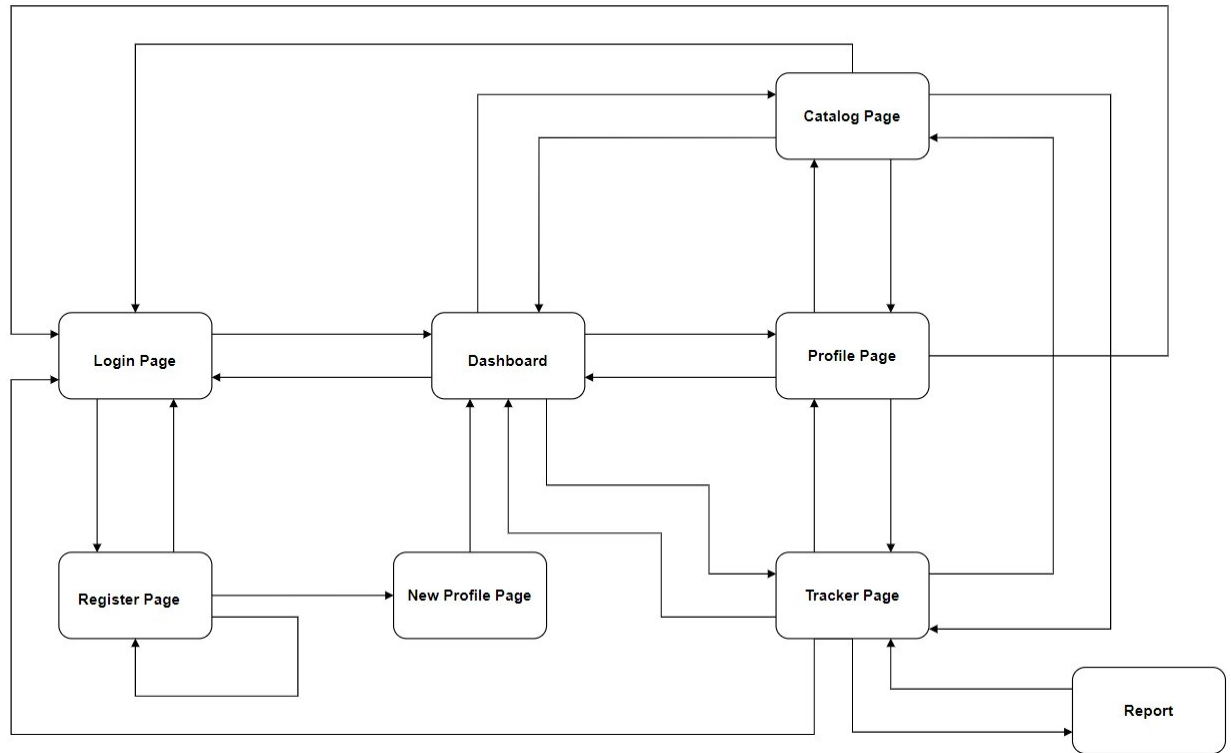
Lab Assessment - Implementation & Testing

Name: Omkar Kabadagi
Registration Number:19BBS0038
Slot: L59+L60
Date:04/10/2020

Team Members:
Rithvik Ayithapu Sai – 19BBS0031
Omkar Kabadagi – 19BBS0038
Akhil Chaitanya Ghanta – 19BBS0039

1. Introduction

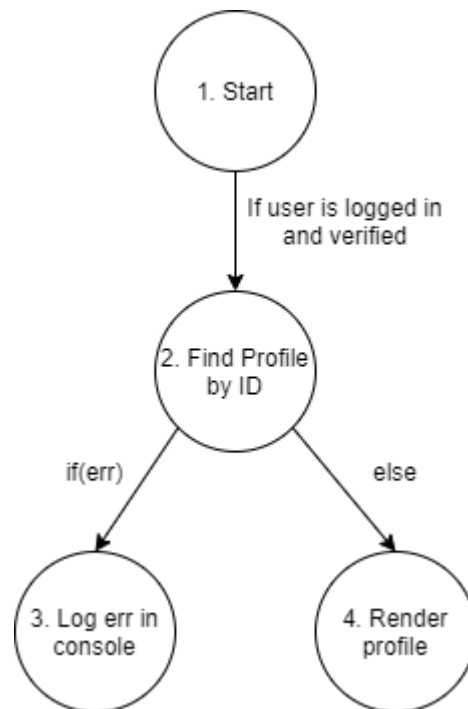
1.1 Block Diagram



1.2 Routes/Modules

1. /profile –

1. Start and Show profile – Pseudocode:
if (user is logged in and verified) {
 fetch profile using id and render it;
} else {
 Redirect to “/profile/new”;
}



Cyclomatic complexity = $E - N + 2 \cdot P$

Where,

E = number of edges in the flow graph,

N = number of nodes in the flow graph,

P = number of nodes that have exit points

So cyclomatic complexity = $3 - 4 - 2 \cdot 2 = 3 - 4 - 4 = 3$

2. Create new profile – Pseudocode:

Render form for user input;

Create profile from user input;

If (error is generated) {

 Log the error in console;

} else {

 Create object with weight of user and timestamp;

 Push weight history of user;

 Record target weight of user;

 Save profile;

 Fetch profile of user {

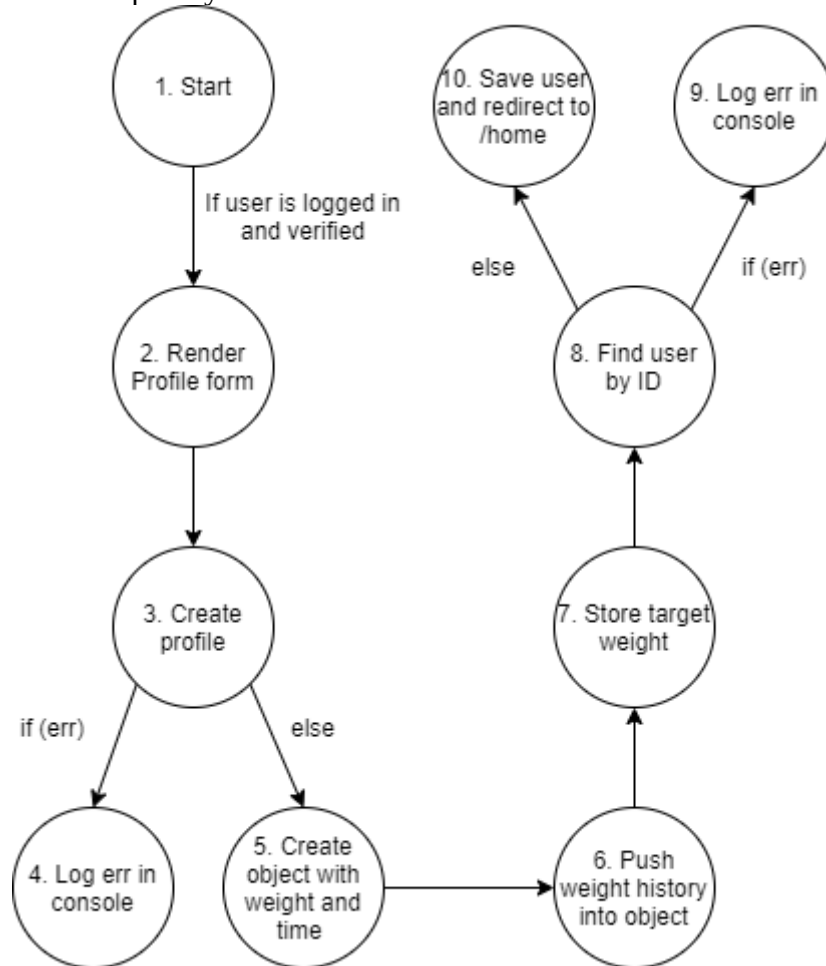
 If (error is generated) {

```

        Log the error in console;
    } else {
        Redirect to “/home”;
    }
}

```

Cyclomatic complexity = $E - N + 2 * P = 9 - 10 + 2 * 3 = 9 - 10 + 6 = 5$



3. Edit profile – Pseudocode:
- ```

Fetch profile of user;
If (error is generated) {
 Log the error in console;
} else {
 Render profile of user;
}
Input changes user wants to make in profile;
Update profile;
If (error is generated) {
 Log the error in console;
 Redirect “/home”;
} else {

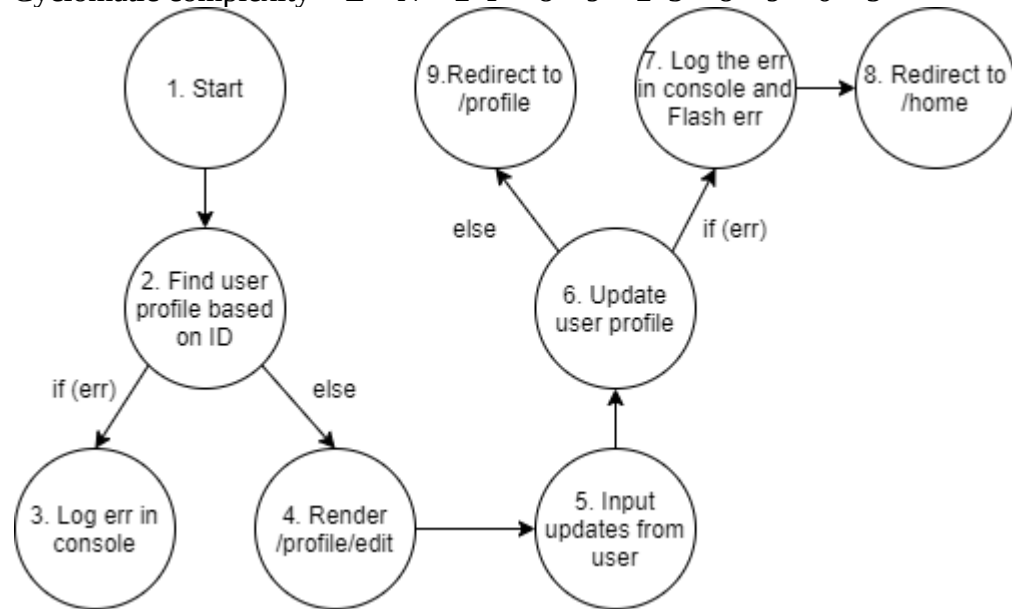
```

```

Redirect “/profile”;
}

```

Cyclomatic complexity =  $E - N + 2 * P = 8 - 9 + 2 * 3 = 8 - 9 + 6 = 5$



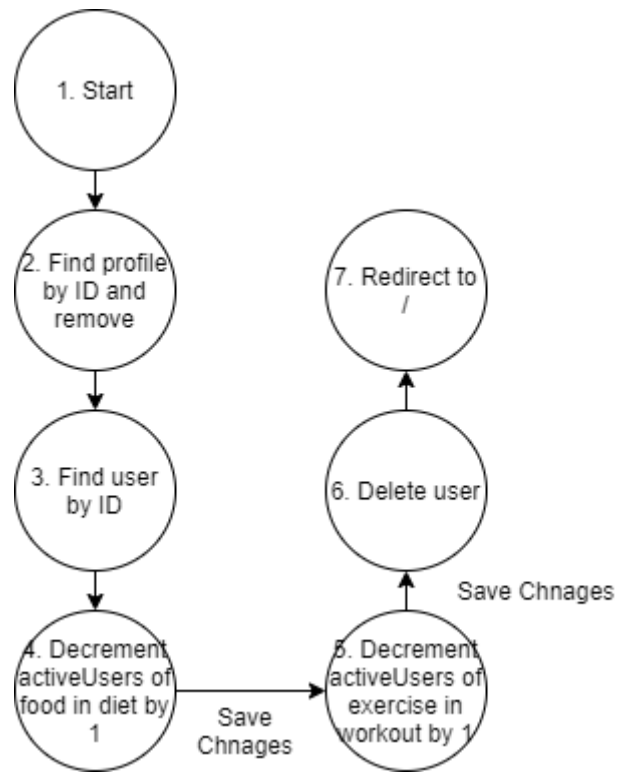
#### 4. Delete profile – Pseudocode:

```

Fetch user profile;
Find user's diet;
Reduce active users in diets by 1;
Reduce active users in workouts by 1;
Remove user profile;
Save changes;
If (error is generated) {
 Log the error in console;
} else {
 Redirect to “/home”;
}

```

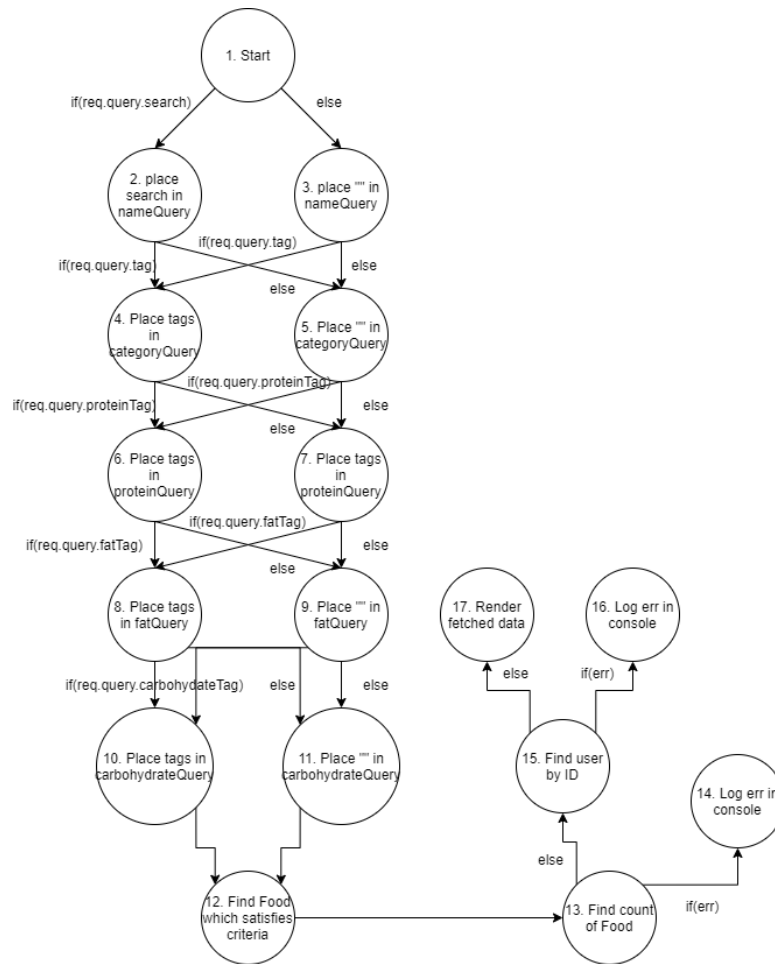
Cyclomatic complexity =  $E - N + 2 * P = 6 - 7 + 2 * 1 = 1$



## 2. /diets –

1. Start
2. Show dishes – Pseudocode:
  - Fetch dishes and render them;
  - If (search is not used) {
    - Render all dishes;
  - } else {
    - Search for given keyword;
    - Render the dishes found;
  - }
  - If (category is selected) {
    - Fetch dishes of specific category;
    - Render dishes;
  - }
  - If (nutrient is selected) {
    - Fetch dishes having specific category;
    - Render dishes;
  - }
  - If (error is generated) {
    - Log the error in console;
  - }

$$\text{Cyclomatic complexity} = E - N + 2 * P = 25 - 17 + 2 * 3 = 8 + 6 = 14$$



### 3. Add diet – Pseudocode:

Fetch user details;

If (error is generated) {

    Log the error in console;

} else {

    isThere = false;

    Check diet of user;

    If (user has dish already in diet) {

        Set isThere = true;

    }

    If (!isThere) {

        Fetch the required dish;

        If (error is generated) {

            Log the error in console;

        } else {

            Increment activeUsers of dish by 1;

            Save changes;

            Create object storing food and quantity;

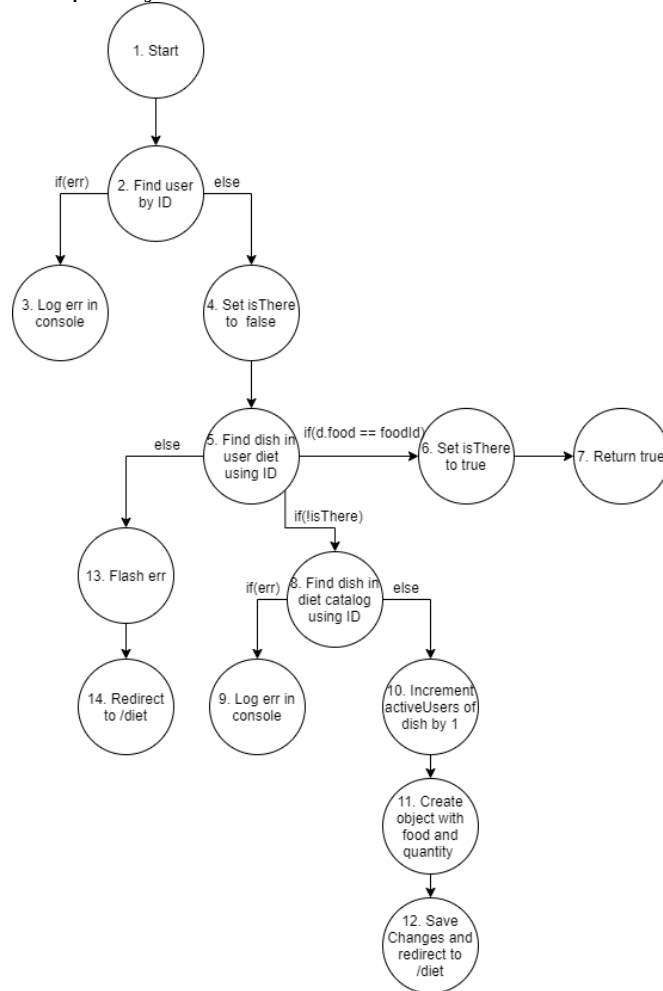
            Push the diet to user;

```

 Save changes;
 Redirect to "/diet";
 }
} else {
 Render error = "Already present in checkout list";
 Redirect to "/diet";
}
}

```

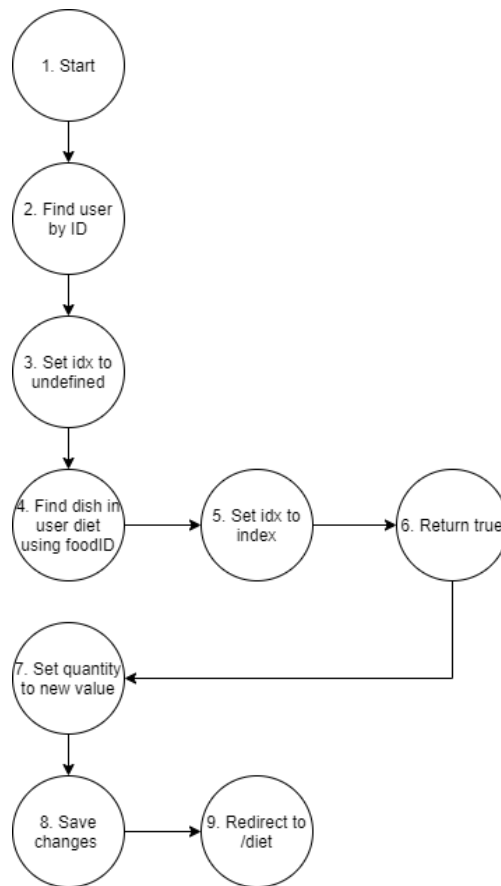
Cyclomatic complexity =  $E - N + 2 * P = 12 - 14 + 2 * 5 = 8$



4. Change diet – Pseudocode:
- Fetch user and dish details;
  - Fetch the diet of the user;
  - Change quantity of the dish in diet;
  - Save changes;
  - Redirect to “/diet”;

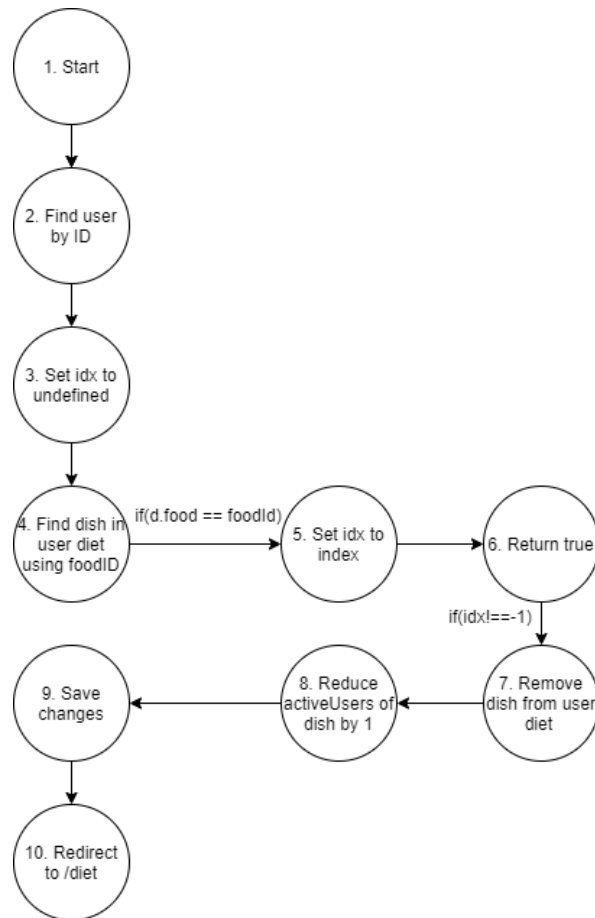
Cyclomatic complexity =  $E - N + 2 * P = 8 - 9 + 2 * 1 = 8 - 9 + 2 = 1$





5. Remove diet – Pseudocode:
- Fetch user and dish details;
  - Fetch the diet of the user;
  - Remove dish from the list of dishes in diet;
  - Save changes;
  - Reduce activeUsers of dish by 1;
  - Save Changes;
  - Redirect to “/diet”;

$$\text{Cyclomatic complexity} = E - N + 2 * P = 9 - 10 + 2 * 1 = 9 - 10 + 2 = 1$$



6. Add new dish – Pseudocode:

Render the form for taking input of the new dish;

Create new dish;

If (error is generated) {

    Render “Something went wrong”;

    Redirect to “/diet”;

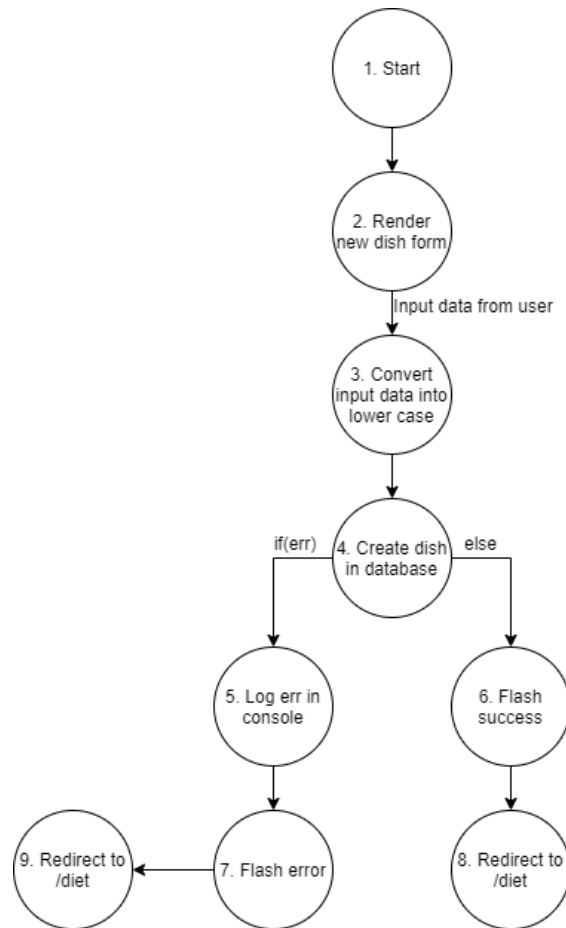
} else {

    Render “Successfully submitted”;

    Redirect to “/diet”;

}

$$\text{Cyclomatic complexity} = E - N + 2 * P = 8 - 9 + 2 * 2 = 8 - 9 + 4 = 3$$



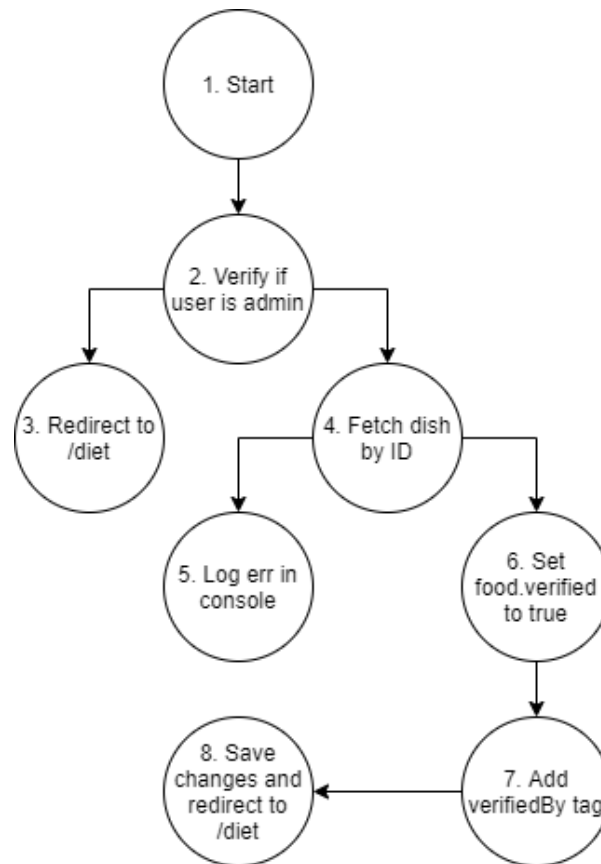
7. Verify dish – Pseudocode:

```

If (user is admin) {
 Fetch food using id;
 If (error is generated) {
 Log the error in console;
 } else {
 Set verified = true;
 Set verifiedBy = user;
 Save changes;
 Redirect to “/diet”;
 }
}

```

Cyclomatic complexity =  $E - N + 2 * P = 7 - 8 + 2 * 3 = 7 - 8 + 6 = 5$



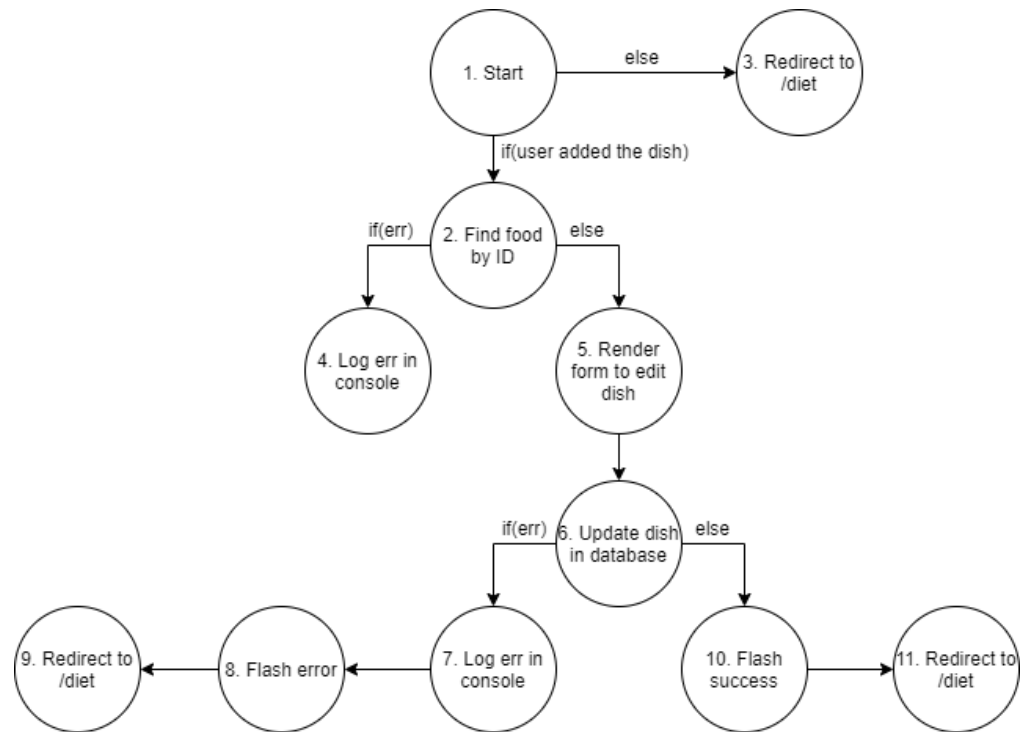
8. Edit and update dish – Pseudocode:

```

Fetch food by id;
If (error is generated) {
 Log the error in console;
} else {
 Render "diet/edit";
}
Input the update to the dish;
Update the dish;
If (error is generated) {
 Log the error in console;
 Flash "something went wrong";
 Redirect to "/diet";
} else {
 Flash "Update successful";
 Redirect "/diet";
}

```

$$\text{Cyclomatic complexity} = E - N + 2 * P = 10 - 11 + 2 * 4 = 10 - 11 + 8 = 7$$



9. Delete dish – Pseudocode:

Find dish by its id and delete it;

If (error is generated) {

Log the error in console;

Flash “something went wrong”;

Redirect to “/diet”;

} else {

Flash “Food deleted”;

For each user {

Fetch diets;

Remove the dish from diet;

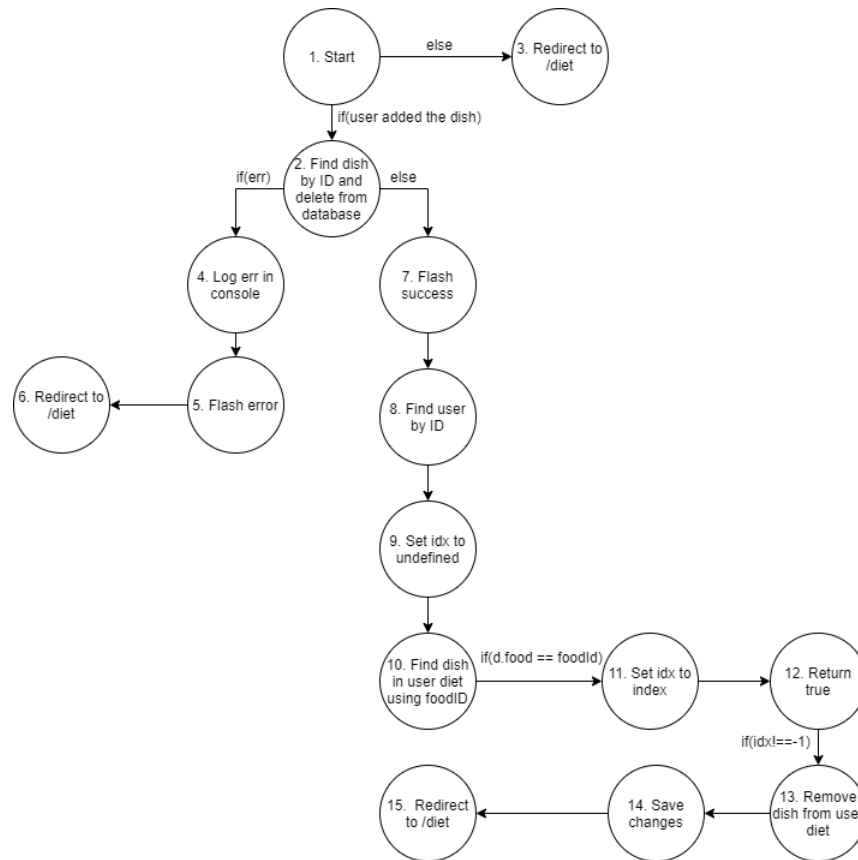
Save changes;

}

Redirect to “/diet”;

}

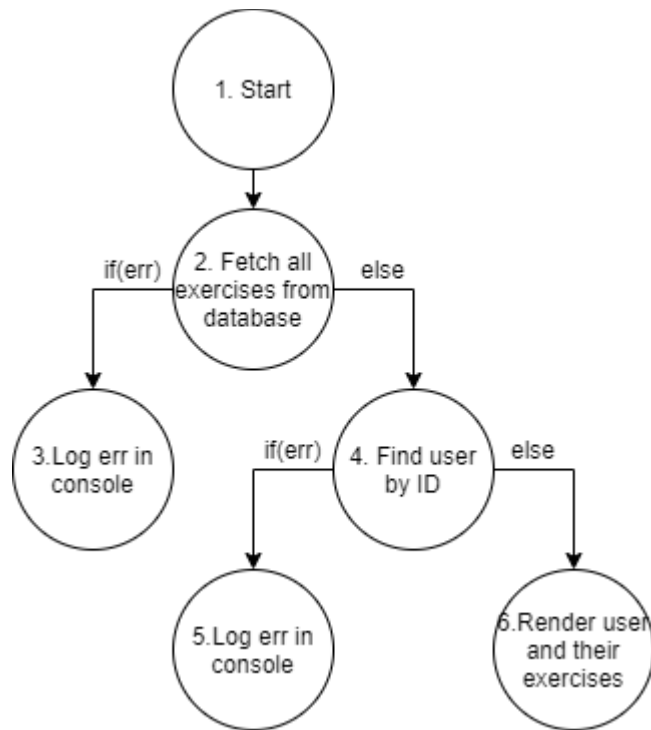
Cyclomatic complexity =  $E - N + 2 * P = 14 - 15 + 2 * 3 = 14 - 15 + 6 = 5$



### 3. /workout

1. Start
2. Show Workouts – Pseudocode:
  - Fetch all workouts and render on screen;
  - If (error is generated) {
    - Log the error in console;
  - }
  - Fetch workouts of the user and render on screen;
  - If (error is generated) {
    - Log the error in console;
  - }

$$\text{Cyclomatic complexity} = E - N + 2 * P = 5 - 6 + 2 * 3 = 5 - 6 + 6 = 5$$



### 3. Add Workouts – Pseudocode:

Fetch user profile using ID;

If (error is generated) {

    Log the error in console “User not found”;

} else {

    Set isThere to false;

    Find exercise in the user’s profile using id;

    If (exercise found) {

        Set isThere to true;

        Return true;

    }

    If (isThere is false) {

        Find exercise by ID in exercises list;

        If (error is generated) {

            Log the error in console “Exercise not found”;

        }

        Else {

            Increment activeUsers of exercise by 1;

            Save the changes;

            Create object {

                Exercise: exercise,

                Duration: input duration

            }

            Push the object to user profile;

            Save the changes;

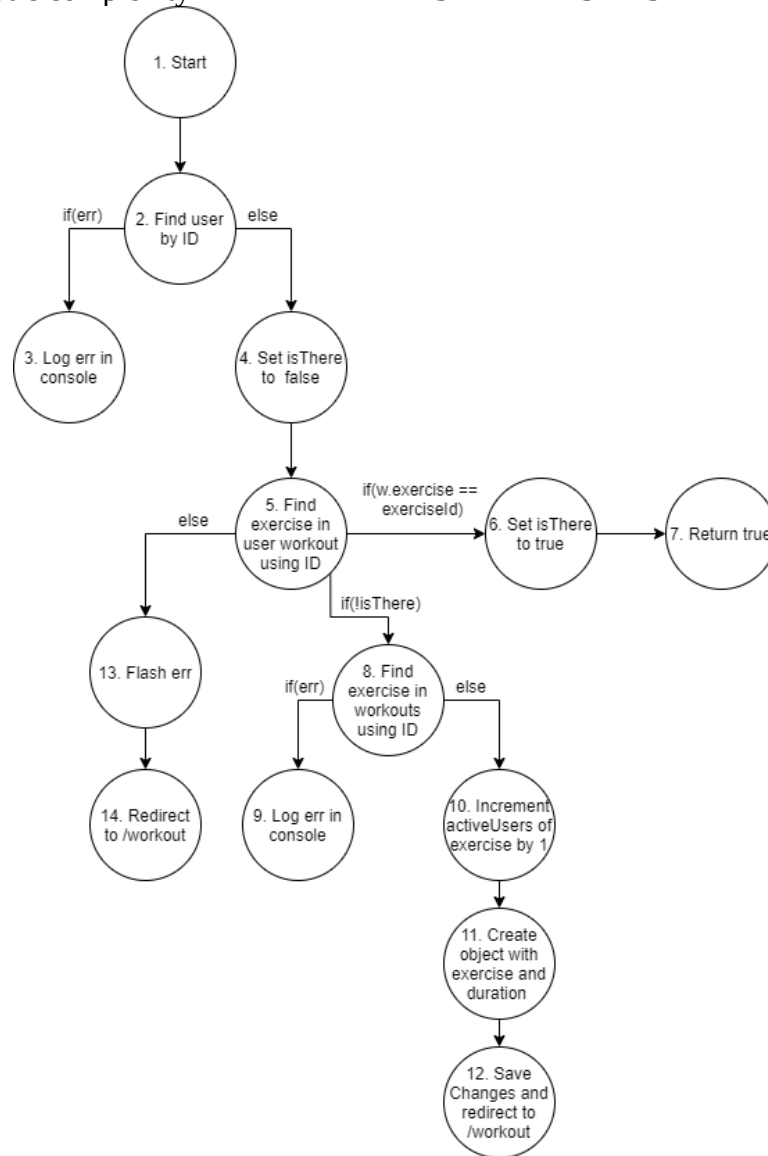
            Redirect to “/workout”;

```

 }
 Else {
 Flash error "Already present in checkout list";
 Redirect to "/workout";
 }
}

```

Cyclomatic complexity =  $E - N + 2 * P = 13 - 14 + 2 * 5 = 13 - 14 + 10 = 9$



4. Remove Workouts – Pseudocode:
- ```

Fetch exercises of the user using ID;
Set idx = undefined;
If (exercise index found in user profile) {
  Set idx = index;
  Return true;
}

```

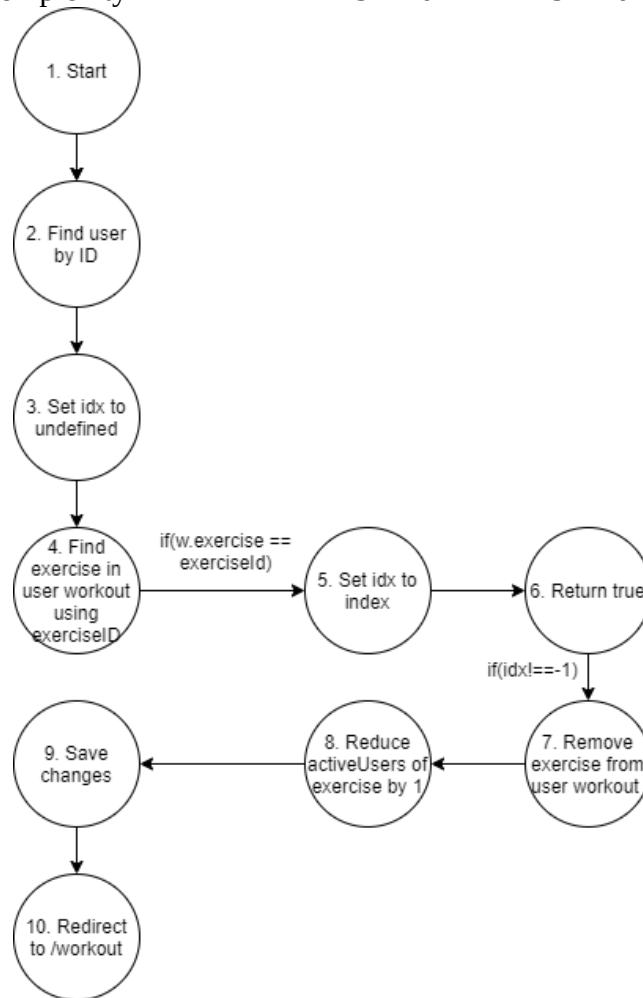


```

If (idx is not equal to -1) {
    Remove exercise from array of user workout;
    Save changes;
    Find exercise by ID in list of exercises;
    Increment activeUsers of exercise by 1;
    Save changes;
    Redirect to “/workout”;
}

```

Cyclomatic complexity = $E - N + 2 * P = 9 - 10 + 2 * 1 = 9 - 10 + 2 = 1$



5. Change Workouts – Pseudocode:
- ```

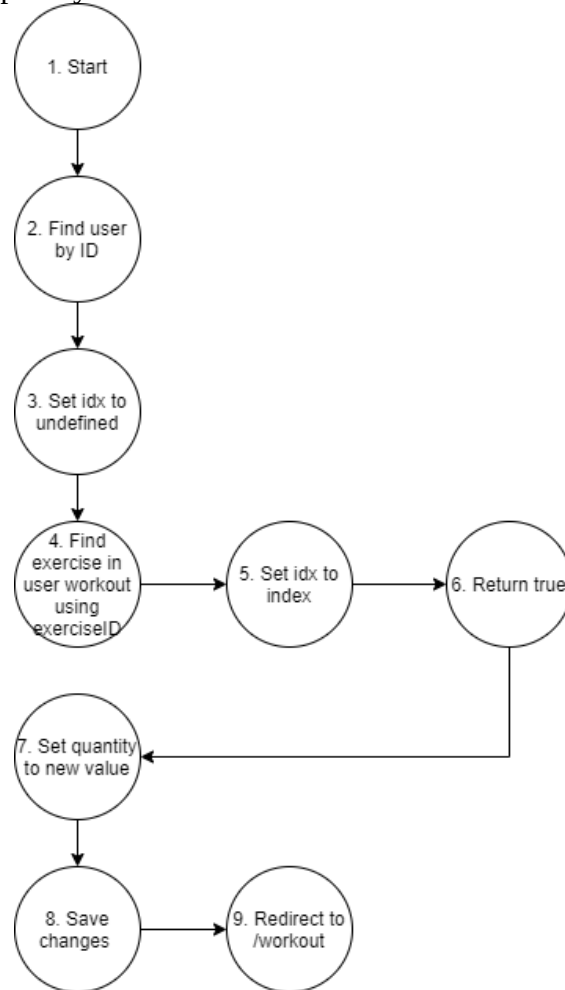
Fetch user profile using ID;
Set idx = undefined;
Find exercise index in user workout array;
If (exercise index found) {
 Set idx = index;
 Return true;
}
Set duration of workout to input from user;

```

Save changes;

Redirect to “/workout”;

$$\text{Cyclomatic complexity} = E - N + 2 * P = 8 - 9 + 2 * 1 = 8 - 9 + 2 = 1$$



6. Create new exercise – Pseudocode:

Render form to input of new exercise;

Set name to exercise name input by user;

Set tag to exercise tag input by user;

Set addedBy to user who gave input;

Create exercise {

  If (error is generated) {

    Log the error in console;

    Flash error “Something went wrong”;

    Redirect to “/workout”;

  } else {

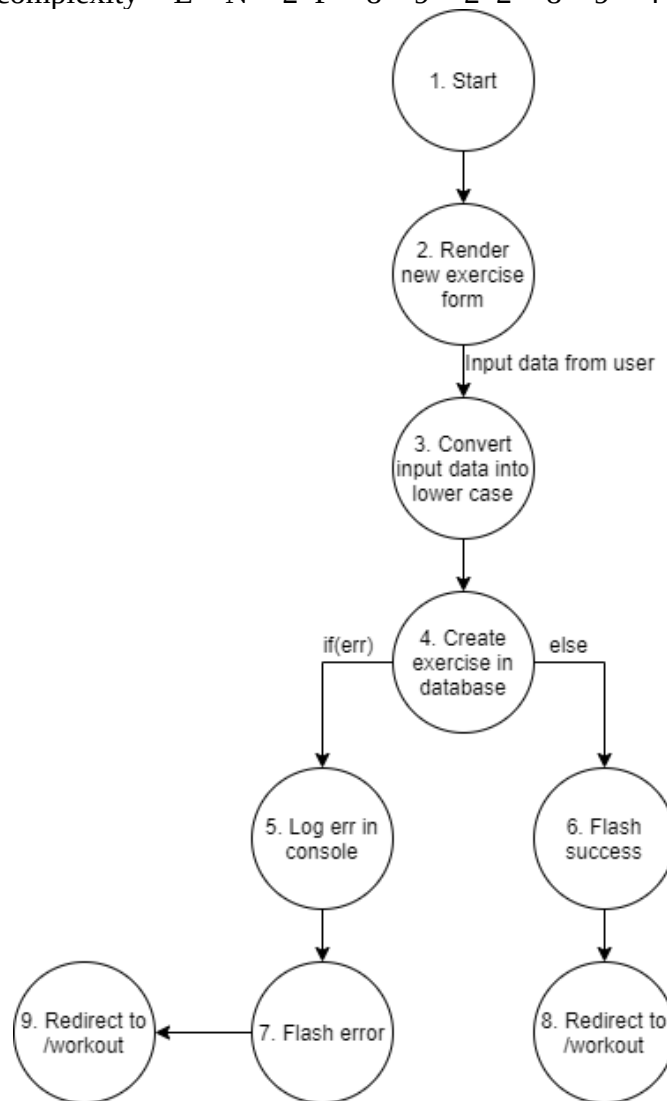
    Flash success “Successfully submitted”;

    Redirect to “/workout”;

  }

}

$$\text{Cyclomatic complexity} = E - N + 2 * P = 8 - 9 + 2 * 2 = 8 - 9 + 4 = 3$$



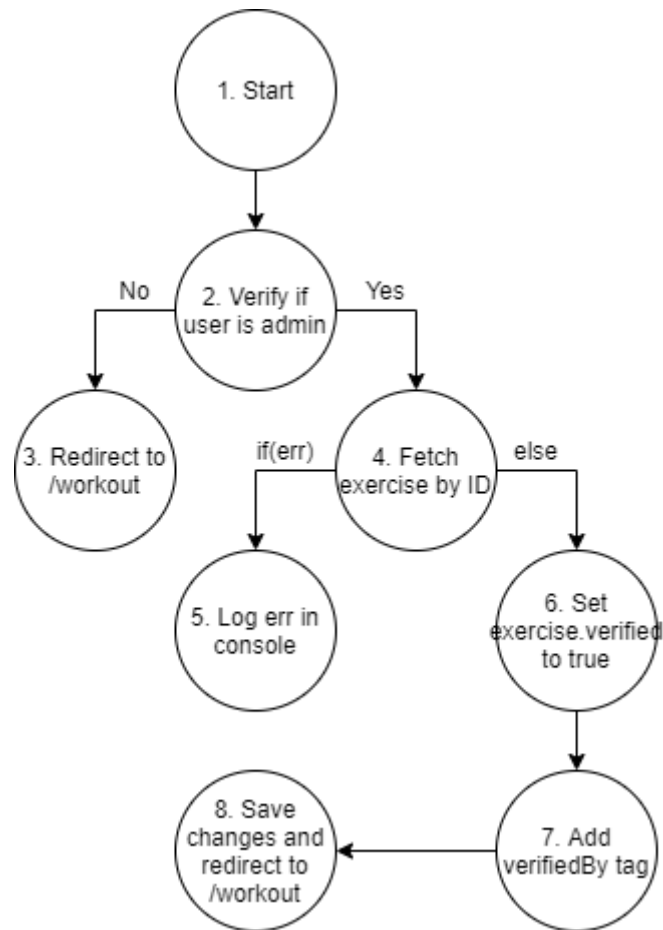
#### 7. Verify exercise – Pseudocode:

```

If (user is admin) {
 Find the exercise by ID;
 If (error is generated) {
 Log the error in console;
 } else {
 Set verified to true;
 Set verifiedBy to user who gave input;
 Save changes;
 Redirect to “/workout”;
 }
} else {
 Flash error “User must be admin to verify”;
}

```

$$\text{Cyclomatic complexity} = E - N + 2 * P = 7 - 8 + 2 * 3 = 7 - 8 + 6 = 5$$



8. Show exercise – Pseudocode:

Fetch exercise from exercises list using ID;

If (error is generated) {

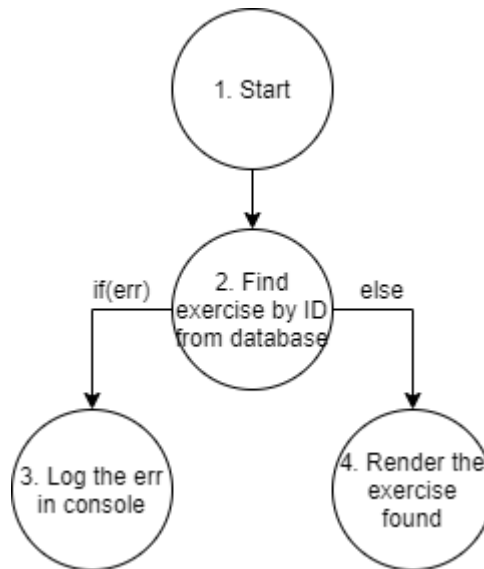
    Log the error in console;

} else {

    Render exercise that was fetched;

}

Cyclomatic complexity =  $E - N + 2 * P = 3 - 4 + 2 * 2 = 3 - 4 + 4 = 3$



9. Edit and Update exercise – Pseudocode:

Fetch exercise from exercises list using exid in request;

Render the fetched exercise;

Input desired changes from user;

Update the exercise with given changes;

If (error is generated) {

    Log the error in console;

    Flash error “Something went wrong”;

    Redirect to “/workout”;

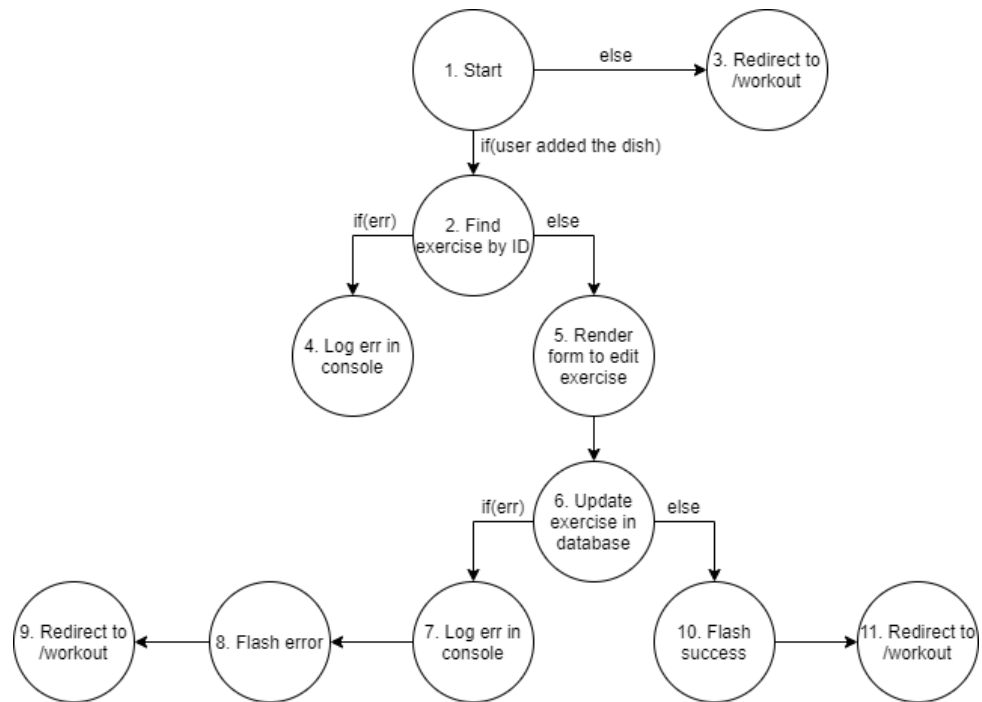
} else {

    Flash success “Update successful”;

    Redirect to “/workout/exercise/exid”;

}

Cyclomatic complexity =  $E - N + 2 * P = 10 - 11 + 2 * 4 = 10 - 11 + 8 = 7$



#### 10. Delete exercise – Pseudocode:

Use `exid` in request to find the exercise and delete it;

If (error is generated) {

Log the error in console;

Flash error “Something went wrong”;

Redirect to “/workout”;

} else {

Flash success “Exercise deleted”;

For all users {

Set `idx` = undefined;

If (user workout contains deleted exercise) {

Index = id of exercise in workout array;

Set `idx` = index;

Return true;

}

}

If (`idx` is not -1) {

Remove exercise from workouts array;

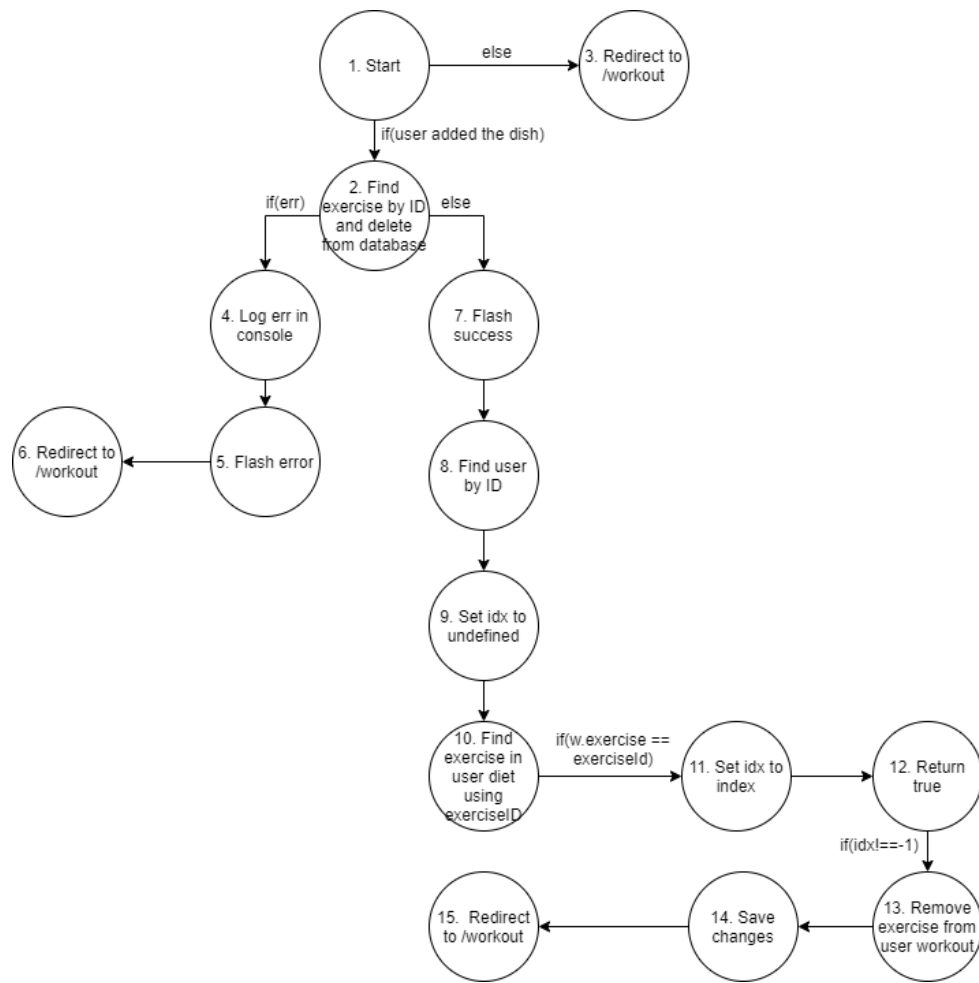
Save changes;

}

Redirect to “/workout”;

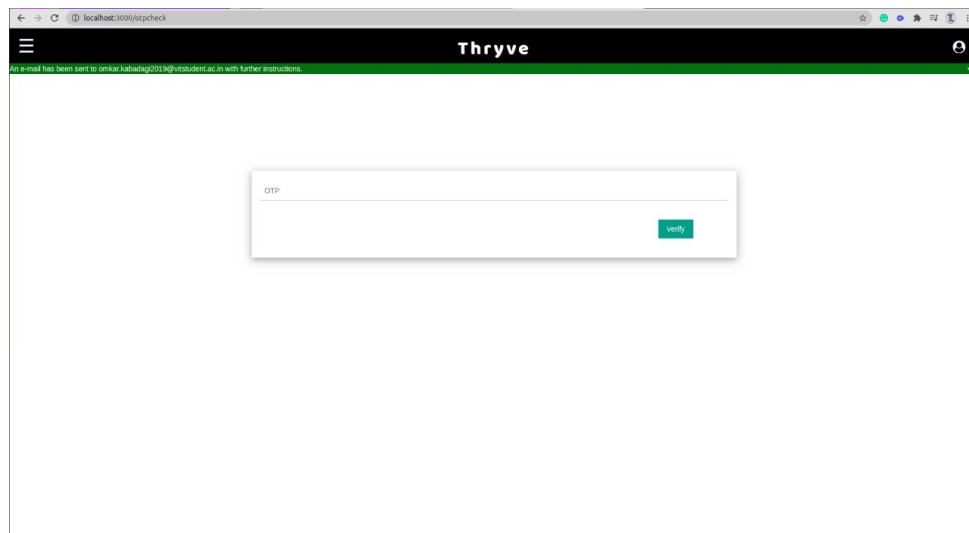
}

Cyclomatic complexity =  $E - N + 2 * P = 14 - 15 + 2 * 3 = 14 - 15 + 6 = 5$



## 1.3 Screenshots of Modules

### 1.3.1 Login/Sign Up

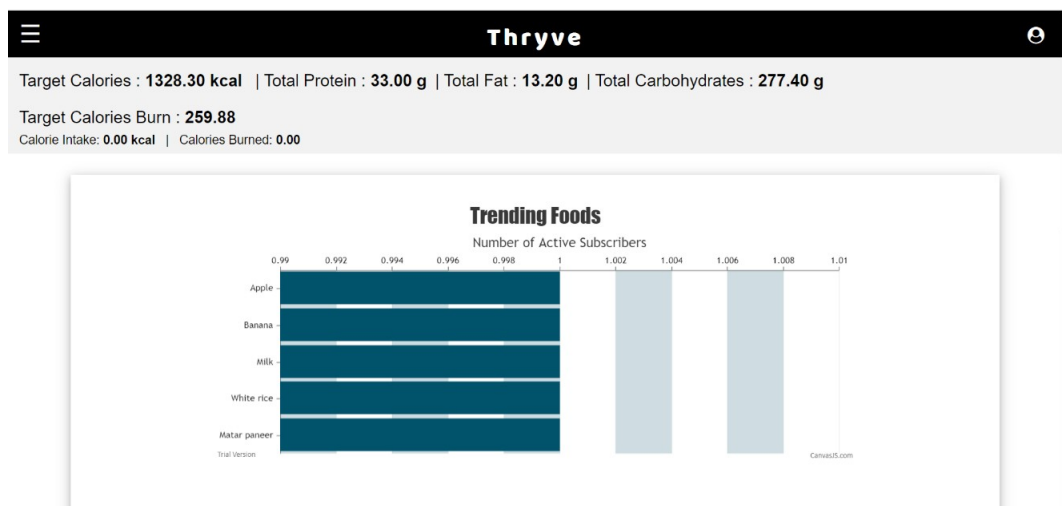


An Email OTP based system is used for those users who either forgot their password or verifying their account for first time.

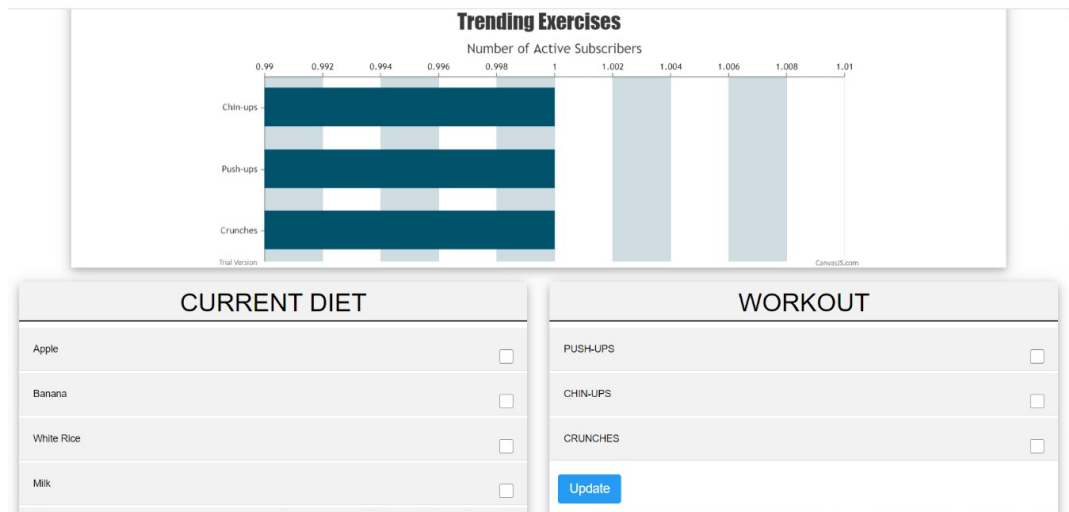
The screenshot shows a web browser window with the URL `localhost:3000/profile/new`. The page has a black header with the 'Thryve' logo and a green notification bar that says 'Verification completed. Please complete your profile.' The main content area is titled 'Enter Your Info' in a cursive font. Below the title is a form with the following fields: 'First Name' (containing 'Omkar'), 'Last Name' (containing 'Kadodugi'), 'Gender' (a dropdown menu set to 'Male'), 'Date Of Birth' (containing '03/11/2001' with a calendar icon), 'Height' (containing '169' with a unit selector set to 'cm'), and 'Weight' (containing '65' with a unit selector set to 'kg'). A blue 'Submit' button is located at the bottom right of the form.

New users or First time users after successful verification redirected to the profile form page where He/she need to fill their basic details like Name ,Gender ,DOB ,Height and Weight.

### 1.3.2 Home

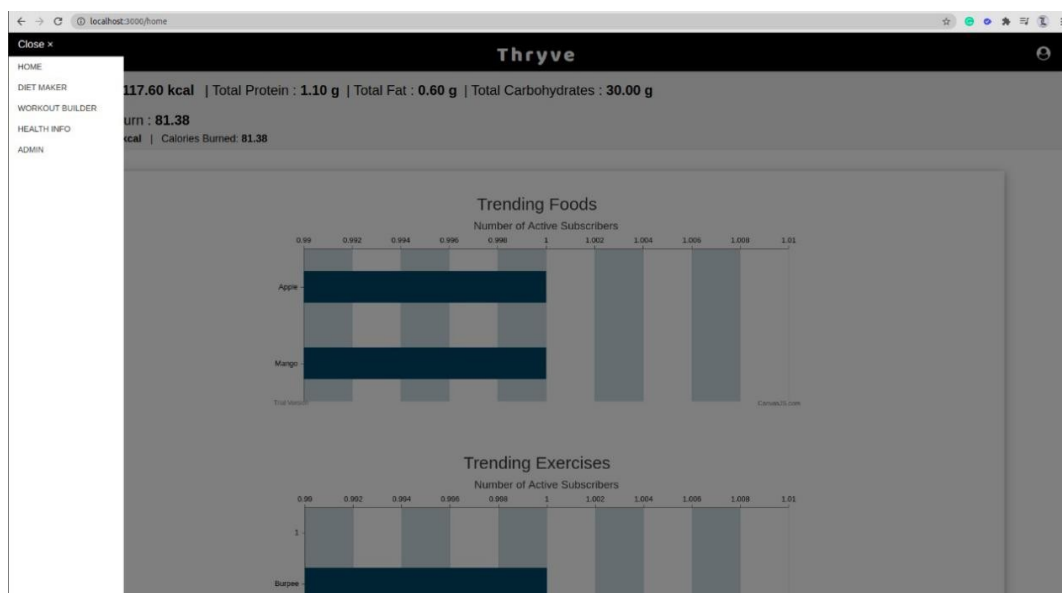






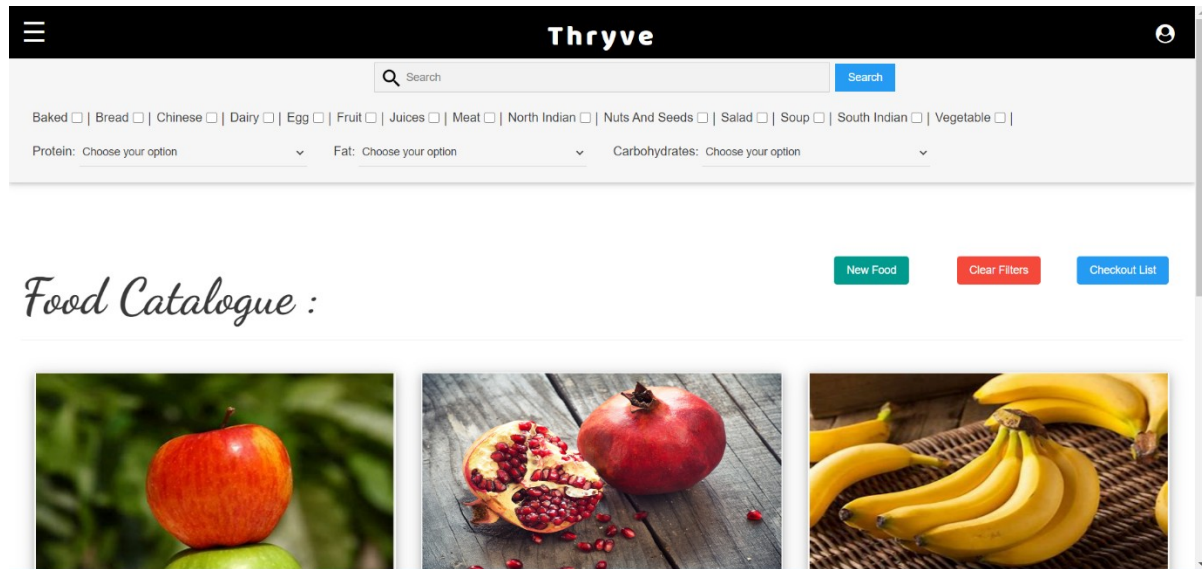
Once the user logs in successfully, he/she redirected to the home page where their nutrient intake is shown along with their calorie goal. Foods and exercises trending among the users is also shown along with the current diet workout of the user. Once a part of the diet is consumed or an exercise is done the user can update it so that the calorie intake or calorie burn at the top of the page is updated.

### 1.3.3 Dashboard

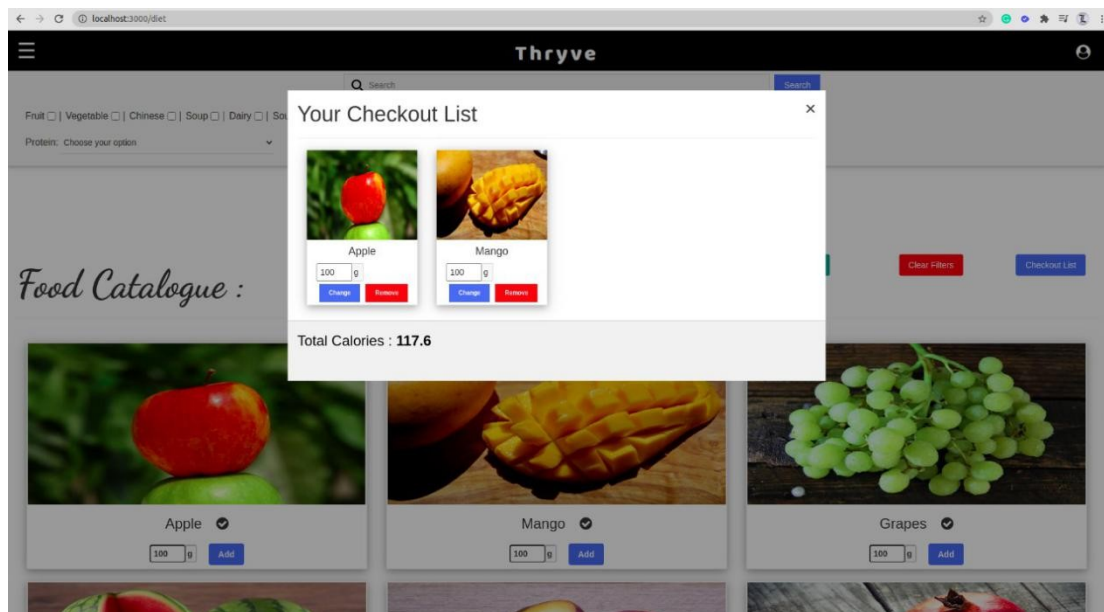


The dashboard is used to jump to the different pages easily.

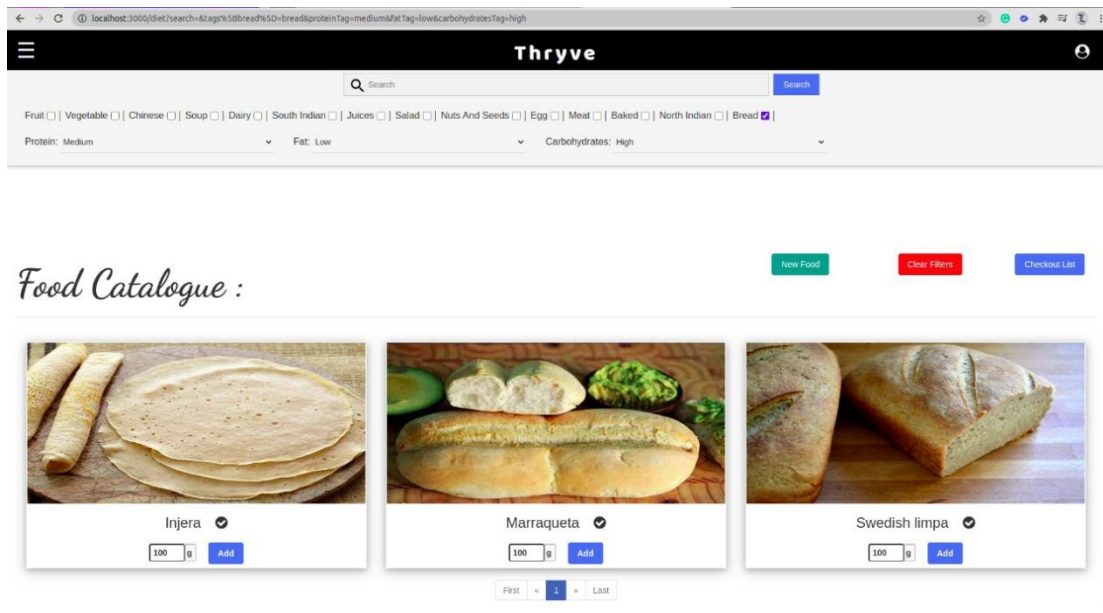
### 1.3.4 Food Catalogue



This page allows the user to create the diet that they will consume. Hovering over a dish gives the nutritional data of the dish. The quantity consumed of the dish can be selected before adding the dish to diet. Search functionality allows users to find dishes. New dishes can be added to the catalogue. These dishes will also receive a verified tag once an admin verifies it.



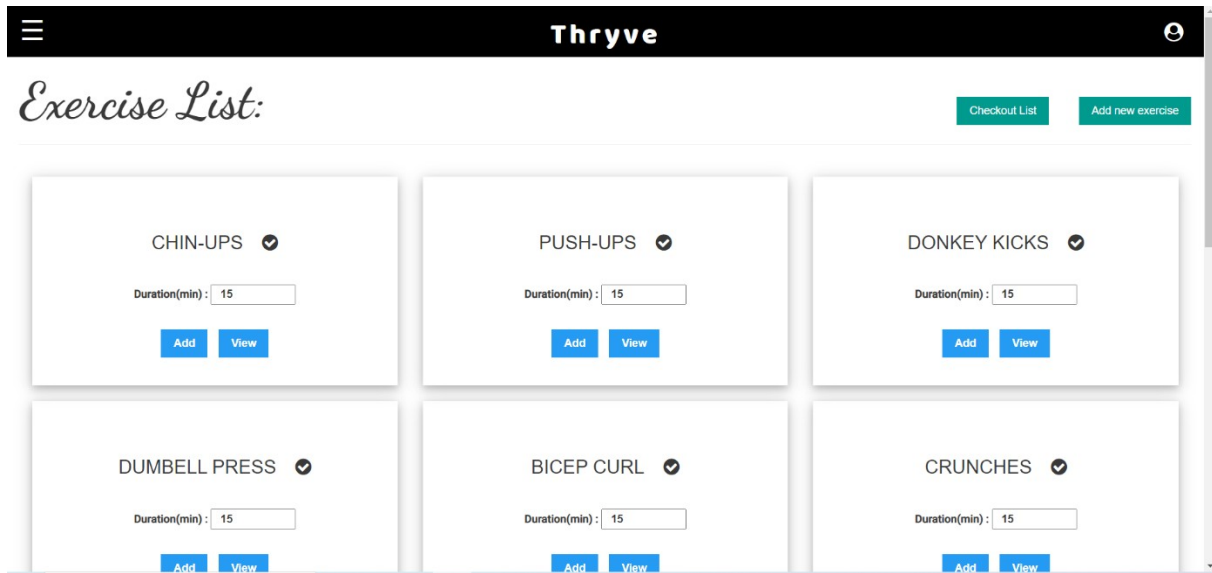
The checkout list keeps the record of the custom diet of the person and make an average count of the calories when the items are consumed.



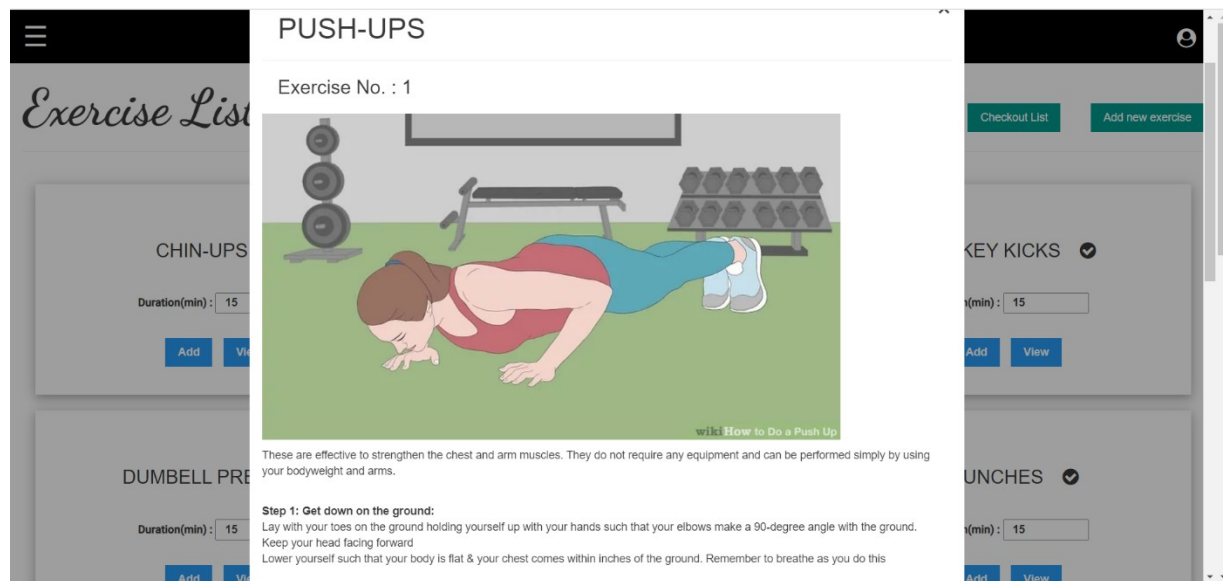
The dishes or fruits are categorized or classified into sub levels which makes it easy to search or find the particular dish or item easily.

This page is used to add new items to the food catalogue. The added item is then approved or verified by a specific person.

### 1.3.5 Workout Builder

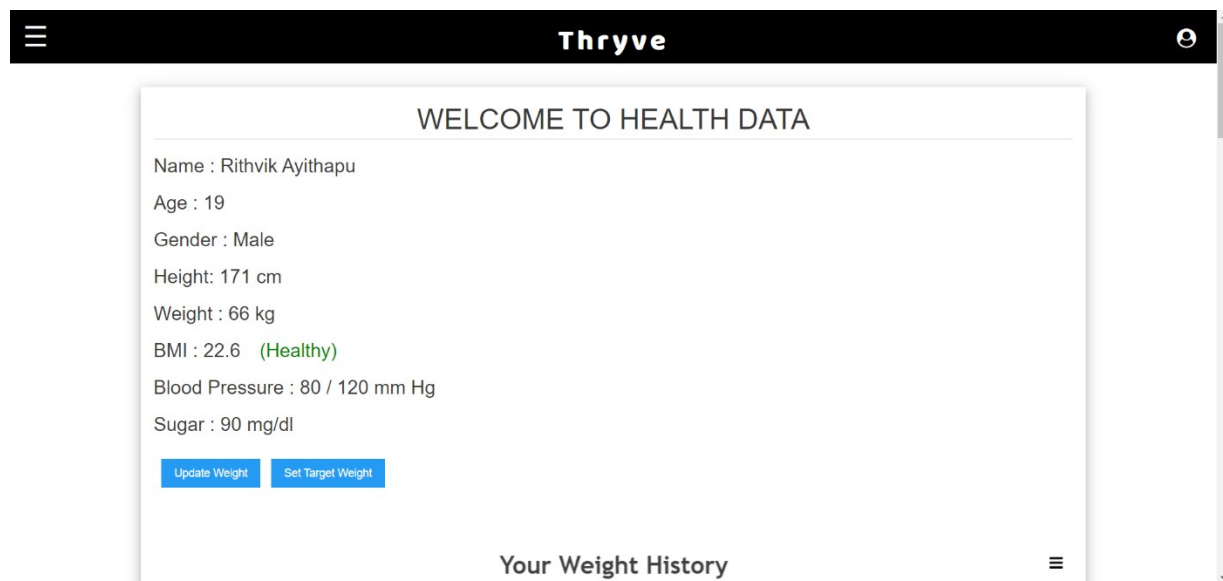


The exercise page allows users to choose exercises to make their workout routine. The duration of the exercise can be selected before adding the exercise to the workout. Based on the duration of the exercise the calories burnt will be calculated. New exercises can be added and the admin can verify them.

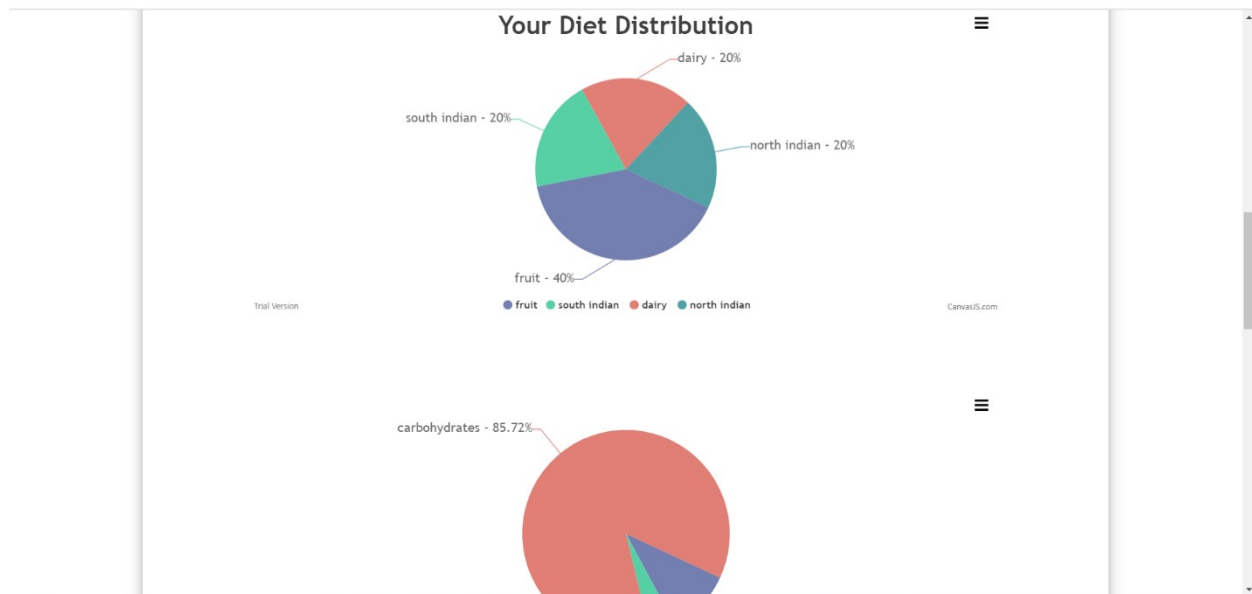


The “View” option in the exercise page teaches the user, how the particular exercise is performed.

### 1.3.6 Health Info



The health info provides all the health information about the user in one page. At the top of the page the user can see their name, age, gender, height, weight, BMI, blood pressure and blood sugar. Following this the user's weight history is shown along with a graph plot showing the trends in the user's weight.



A diet distribution is also provided for the user to understand all the nutrients in the diet he/she is consuming.



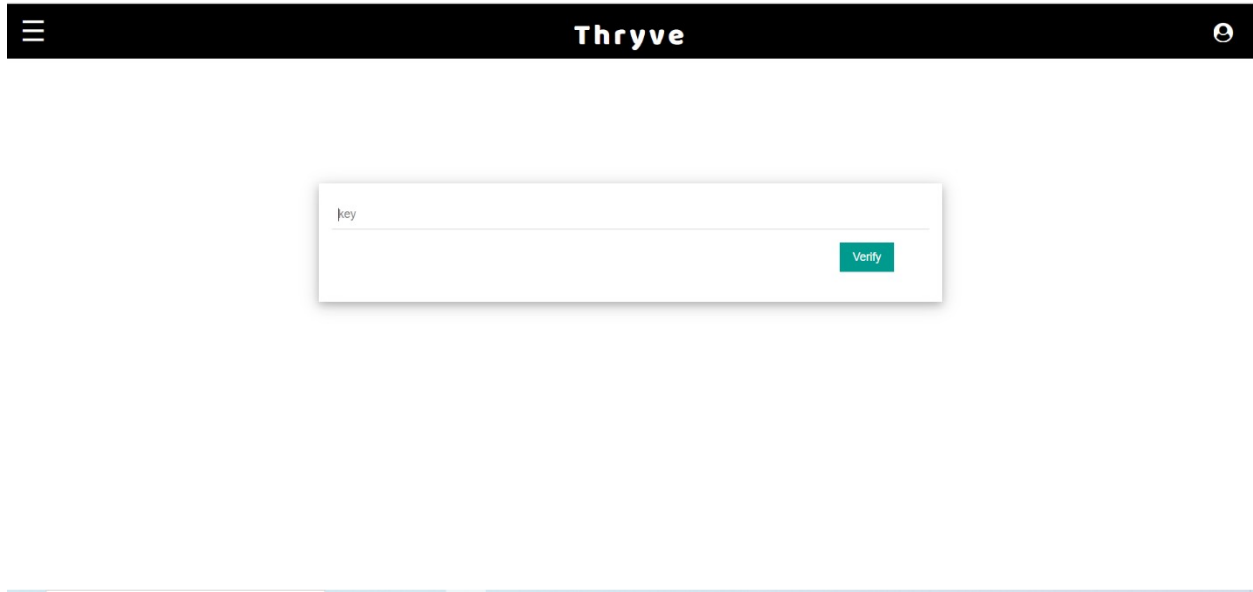
The blood sugar and blood pressure history are given in the form of a graph so that the user can see the trends in the respective category.

### 1.3.7 Profile

The screenshot shows a web browser window with the address bar displaying 'localhost:3000/profile'. The page has a black header with the 'Thryve' logo and a user profile icon. The main content area is titled 'My Profile' and contains the following information: 'Name : Omkar Kabadagi', 'Gender : Male', 'Date of Birth : Sat Nov 03 2001', and 'Age : 19 years'. Below this information are three buttons: 'Edit Profile' (blue), 'Change Password' (green), and 'Delete Profile' (red). The page also features a sidebar menu on the left.

The user profile page shows the basic details of the user and enables the user to update or delete the profile. This page also enables the user to change his/her password.

### 1.3.8 Admin



The screenshot shows the Thryve application interface. At the top is a black navigation bar with a hamburger menu icon on the left, the word "Thryve" in the center, and a user profile icon on the right. Below the navigation bar, the main content area is white and contains a centered form. The form has a text input field with the placeholder text "key" and a green "Verify" button to its right. Below the form, there is a horizontal bar composed of several colored segments (blue, green, yellow, orange, red) that spans the width of the page.

The admin page asks the user to enter a key to change the status from user to admin. Once the key is entered the user shall be given all admin privileges like verifying dishes and exercises.

## 2. Testing

### 2.1 Test Case Generation

| TEST CASE ID | TEST OBJECTIVE | TEST DATA                                                                                                                                                                                           | EXPECTED RESULT                            | ACTUAL RESULT                              | PASS/FAIL |
|--------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|-----------|
| TEST CASE 1  | SIGN UP        | (not registered)<br>Username: omkar<br>Email: <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a><br>Password: omkar123<br>Password confirm: omkar123      | Msg: complete the verification<br><br>/opt | Msg: complete the verification<br><br>/opt | pass      |
| TEST CASE 2  | SIGN UP        | (not registered)<br>Username: omkar<br>Email: <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a><br>Password: omkar<br>Password confirm: omkar            | Err: Minimum password length 8             | Err: Minimum password length 8             | pass      |
| TEST CASE 3  | SIGN UP        | (not registered)<br>Username: omkar<br>Email: <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a><br>Password: omkar123<br>Password confirm: omkar1234     | Err: password mismatch                     | Err: password mismatch                     | pass      |
| TEST CASE 4  | SIGN UP        | (registered already)<br>Username: omkar2<br>Email: <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a><br>Password: omkar123<br>Password confirm: omkar123 | Err: account with this email already exist | Err: account with this email already exist | pass      |
| TEST CASE 5  | LOGIN          | (registered already)<br>Username: omkar<br>Password: omkar123                                                                                                                                       | Msg: Successful login<br><br>/home         | Msg: Successful login<br><br>/home         | pass      |



|              |                 |                                                                                                                                                                                            |                                                                                                                           |                                                                                                     |      |
|--------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------|
| TEST CASE 6  | LOGIN           | (not registered)<br>Username: omkar3<br>Password: omkar123                                                                                                                                 | Err:<br>incorrect<br>username<br>or<br>password                                                                           | Err:<br>incorrect<br>username<br>or<br>password                                                     | pass |
| TEST CASE 7  | SEND OTP        | (registered in with<br><a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br>Click SEND OTP                                                    | Msg:<br>Check<br>your email<br>for further<br>instructions<br><br>/otpCheck<br><br>Mail<br>received if<br>email<br>exists | Msg:<br>Check<br>your email<br>for further<br>instructions<br><br>/otpCheck<br><br>Mail<br>received | pass |
| TEST CASE 8  | ENTER OTP       | (registered in with<br><a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Enter OTP received in mail<br>(within 1 hr of receiving mail) | Msg:<br>Verified<br><br>/profile/<br>new                                                                                  | Msg:<br>Verified<br><br>/profile/<br>new                                                            | pass |
| TEST CASE 9  | ENTER OTP       | (registered in with<br><a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Enter OTP received in mail<br>(after 1 hr of receiving mail)  | Msg: otp<br>expired<br><br>/otp                                                                                           | Msg: otp<br>expired<br><br>/otp                                                                     | pass |
| TEST CASE 10 | ENTER OTP       | (registered in with<br><a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Entered incorrect OTP                                         | Msg:<br>incorrect<br>otp<br><br>/otp                                                                                      | Msg:<br>incorrect<br>otp<br><br>/otp                                                                | pass |
| TEST CASE 11 | FORGOT PASSWORD | (email is registered)<br>Email:<br><a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a>                                                            | Msg:<br>email has<br>been sent<br>to mail<br>with<br>further<br>details                                                   | Msg:<br>email has<br>been sent<br>to mail<br>with<br>further<br>details                             | pass |

|              |                                    |                                                                                                                                                                                                                                                                           |                                       |                                       |      |
|--------------|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|------|
|              |                                    |                                                                                                                                                                                                                                                                           | Generate temporary link               | Generate temporary link               |      |
| TEST CASE 12 | FORGOT PASSWORD                    | (email is not registered with the site)<br>Email: okabadagi@live.co.uk                                                                                                                                                                                                    | Err: no account with given mail found | Err: no account with given mail found | pass |
| TEST CASE 13 | RESET PASSWORD                     | (email: <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Click link in mail                                                                                                                                          | /reset/:token                         | /reset/:token                         | pass |
| TEST CASE 14 | RESET PASSWORD                     | (email: <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>New password: omkar123                                                                                                                                      | /home<br><br>Password changed         | /home<br><br>Password changed         | pass |
| TEST CASE 15 | NEW PROFILE AFTER OTP VERIFICATION | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>First Name: Omkar<br>Last Name: Kabadagi<br>Gender: Male<br>DOB: 3/11/2001 (doesn't accept future dates)<br><br>Height: 168 cm<br>Weight: 65 kg | /home                                 | /home                                 | pass |
| TEST CASE 16 | PROFILE EDIT                       | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Edited last name to K from Kabadagi                                                                                                             | Profile Updated<br><br>/home          | Profile Updated<br><br>/home          | pass |
| TEST CASE 17 | ADMIN ROLE                         | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )                                                                                                                                                        | /home<br><br>Admin rights             | /home<br><br>Admin rights             | pass |

|              |                                            |                                                                                                                                                    |                                                                              |                                                                              |      |
|--------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------|
|              |                                            | Key: abcxyz@123 (correct key)                                                                                                                      | given                                                                        | available                                                                    |      |
| TESTCASE 18  | ADMIN ROLE                                 | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Key: acbdefg (wrong key) | /home<br><br>Msg: Incorrect key<br><br>Admin rights denied                   | /home<br><br>Msg: Incorrect key<br><br>Admin rights denied                   | pass |
| TEST CASE 19 | HOME                                       | After login or registration                                                                                                                        | Dashboard<br><br>Trending dishes and exercises<br><br>Diet and Exercise List | Dashboard<br><br>Trending dishes and exercises<br><br>Diet and Exercise List | pass |
| TEST CASE 20 | MATCH DASHBOARD WITH DIET AND WORKOUT LIST | Match values of Diet and Workout list with Dashboard                                                                                               | Must Match                                                                   | Matched                                                                      | pass |
| TEST CASE 21 | UPDATE CHECKLIST OF DIET                   | (apple and mango in checklist)<br><br>Check Apple                                                                                                  | Apple checked<br><br>Dashboard Updated                                       | Apple checked<br><br>Dashboard Updated                                       | pass |
| TEST CASE 22 | UPDATE CHECKLIST OF WORKOUT                | (burpees and push ups in checklist)<br><br>Check burpees                                                                                           | Burpees checked<br>Dashboard Updated                                         | Burpees checked<br>Dashboard Updated                                         | pass |
| TEST CASE 23 | DIET PAGE                                  | Diet page clicked                                                                                                                                  | /diet<br><br>Display the catalogue of foods                                  | /diet<br><br>Display the catalogue of foods                                  | pass |

|              |                                        |                                                                                                                                   |                                                     |                                                            |      |
|--------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------|------|
| TEST CASE 24 | DIET PAGE AUTOCOM PLETE SEARCH         | Input: pla                                                                                                                        | List of dishes starting with 'pla'                  | Plain dosa                                                 | pass |
| TEST CASE 25 | DIET PAGE FILTER                       | Category: Bread<br>Protein: Medium<br>Fat: Low<br>Carbohydrates: High                                                             | Filter breads with mentioned nutrient composition   | Breads with medium protein, low fat and high carbohydrates | pass |
| TEST CASE 26 | DIET PAGE ADD DISHES                   | Add apple, and mango to checkout cart with default quantity                                                                       | 100g of Apple and Mango in Checkout list            | 100g of Apple and Mango in Checkout list                   | pass |
| TEST CASE 27 | DIET PAGE CHANGE DISH QUANTITY         | Change quantity of mango to 500g                                                                                                  | 100g of Apple and 500g Mango in Checkout list       | 100g of Apple and 500g Mango in Checkout list              | pass |
| TEST CASE 28 | DIET PAGE REMOVE DISH                  | Remove apple from checkout list                                                                                                   | 500g Mango in Checkout list                         | 500g Mango in Checkout list                                | pass |
| TEST CASE 29 | ADD CUSTOM DISH                        | Name: Banana and Papaya Smoothie<br>Category: Juice<br>Protein: Medium (0.8 g)<br>Fat: Low (0.2 g)<br>Carbohydrate: High (13.8 g) | Banana and Papaya Smoothie in database under juices | Banana and Papaya Smoothie in database under juices        | pass |
| TEST CASE 30 | VERIFY CUSTOM DISHES OF USERS BY ADMIN | Verify: Banana and Papaya Smoothie                                                                                                | Banana and Papaya Smoothie verified with tick       | Banana and Papaya Smoothie verified with tick              | pass |

|              |                                          |                                                                                                                                                  |                                                      |                                                      |      |
|--------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------|
| TEST CASE 31 | WORKOUT BUILDER PAGE                     | Workout builder page clicked                                                                                                                     | / workoutbuilder<br><br>Display the exercises        | / workoutbuilder<br><br>Display the exercises        | pass |
| TEST CASE 32 | WORKOUT BUILDER PAGE ADD EXERCISES       | Add burpees with default time                                                                                                                    | 15 min of Burpees in Checkout list                   | 15 min of Burpees in Checkout list                   | pass |
| TEST CASE 33 | WORKOUT BUILDER CHANGE EXERCISE TIME     | Change time of burpees to 10 min                                                                                                                 | 10 min of Burpees in Checkout list                   | 10 min of Burpees in Checkout list                   | pass |
| TEST CASE 34 | WORKOUT BUILDER REMOVE DISH              | Burpees from checkout list                                                                                                                       | Empty Check out list                                 | Empty Check out list                                 | pass |
| TEST CASE 35 | ADD CUSTOM EXERCISE                      | Name: My exercise<br>MET: 3<br>Steps: These are the steps                                                                                        | My exercise added to database                        | My exercise added to database                        | pass |
| TEST CASE 36 | VERIFY CUSTOM EXERCISE OF USERS BY ADMIN | Verify: My exercise                                                                                                                              | My exercise verified with tick                       | My exercise verified with tick                       | pass |
| TEST CASE 37 | HEALTHINFO                               | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Health info clicked    | /healthinfo<br><br>User health info display          | /healthinfo<br><br>User health info display          | pass |
| TEST CASE 38 | UPDATE WEIGHT                            | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Update weight to 63 kg | Update weight to 63 kg with new data point on weight | Update weight to 63 kg with new data point on weight | pass |

|              |                       |                                                                                                                                                          |                                                              |                                                              |      |
|--------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|------|
|              |                       |                                                                                                                                                          | graph                                                        | graph                                                        |      |
| TEST CASE 39 | SET TARGET WEIGHT     | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Set new target weight to 60 kg | Target weight to 60 kg, display in graph                     | Target weight to 60 kg, display in graph                     | pass |
| TEST CASE 40 | UPDATE BLOOD PRESSURE | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Update BP to 120/80 mmHg       | Update BP to 120/80 mmHg with new data point on BP graph     | Update BP to 120/80 mmHg with new data point on BP graph     | pass |
| TEST CASE 41 | UPDATE BLOOD SUGAR    | (registered in with <a href="mailto:omkar.kabadagi2019@vitstudent.ac.in">omkar.kabadagi2019@vitstudent.ac.in</a> )<br><br>Update Sugar to 140 mg/dl      | Update Sugar to 140 mg/dl with new data point on Sugar graph | Update Sugar to 140 mg/dl with new data point on Sugar graph | pass |

## 2.2 Testing Tool

We have used CrossBrowserTesting by Smartbear as our testing tool to perform automated and performance testing.

### 2.3.1 Details of Testing Tool

CrossBrowserTesting allows users to easily run manual, visual and Selenium tests in the cloud and test on more than 2050 real desktop and mobile browsers. Here we have used the software for performance testing.

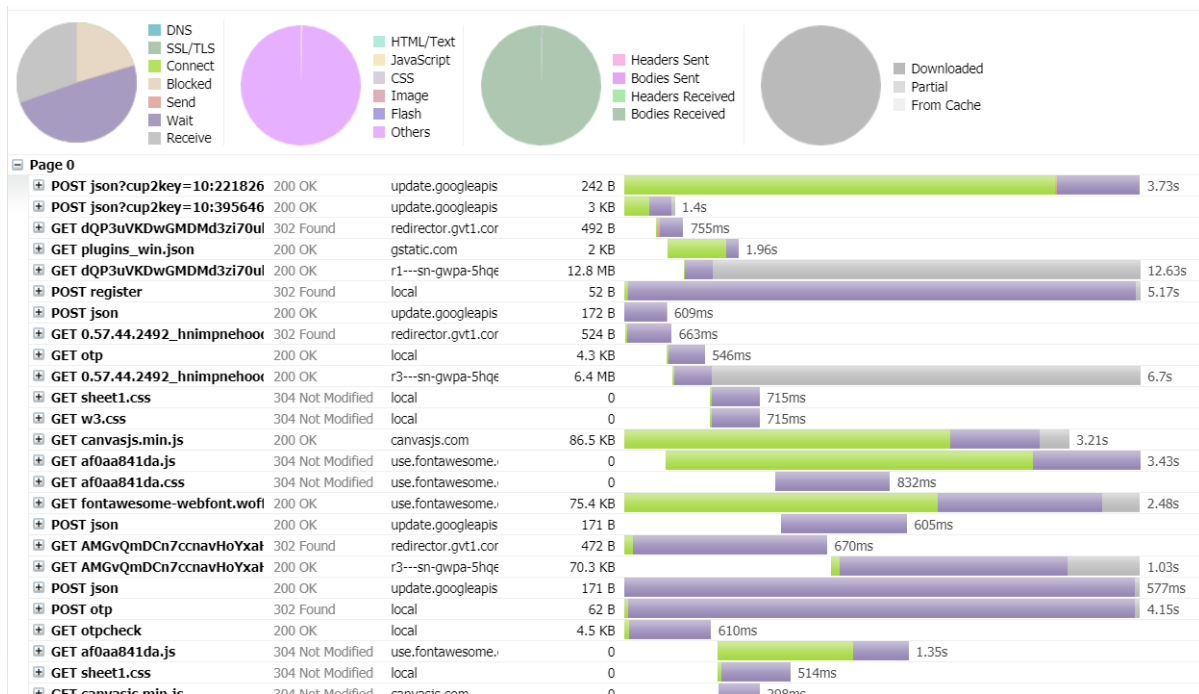
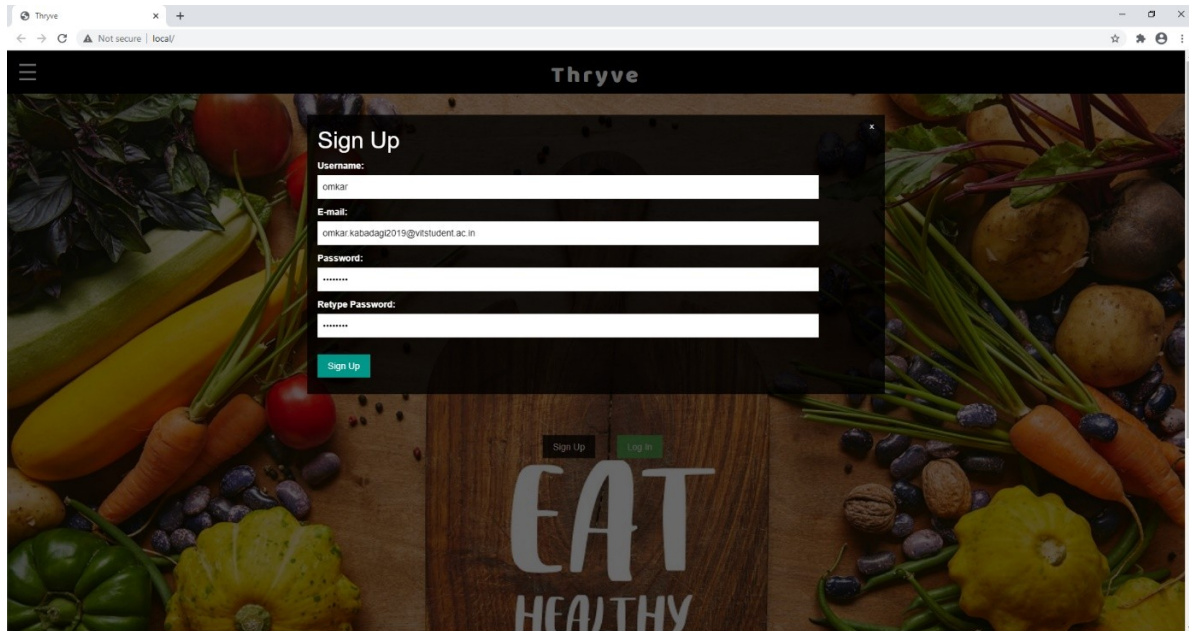
### 2.3.2 Configuration of Testing Tool

The testing tool is a licensed software. The free trial was used to run test cases. In terms of configuration used for testing the website the following steps were followed:

- Start MongoDB on Localhost.
- Start NodeJS on Localhost.
- Set the root directory of the project using the CrossBrowserTesting Command Line Interface.
- Start Live Test by remote SSH into CrossBrowserTesting with Desktop Setup
  - o OS: Windows 10
  - o Browser: Google Chrome 86 (64-bit)

## 2.3.3 Graph Generation with table

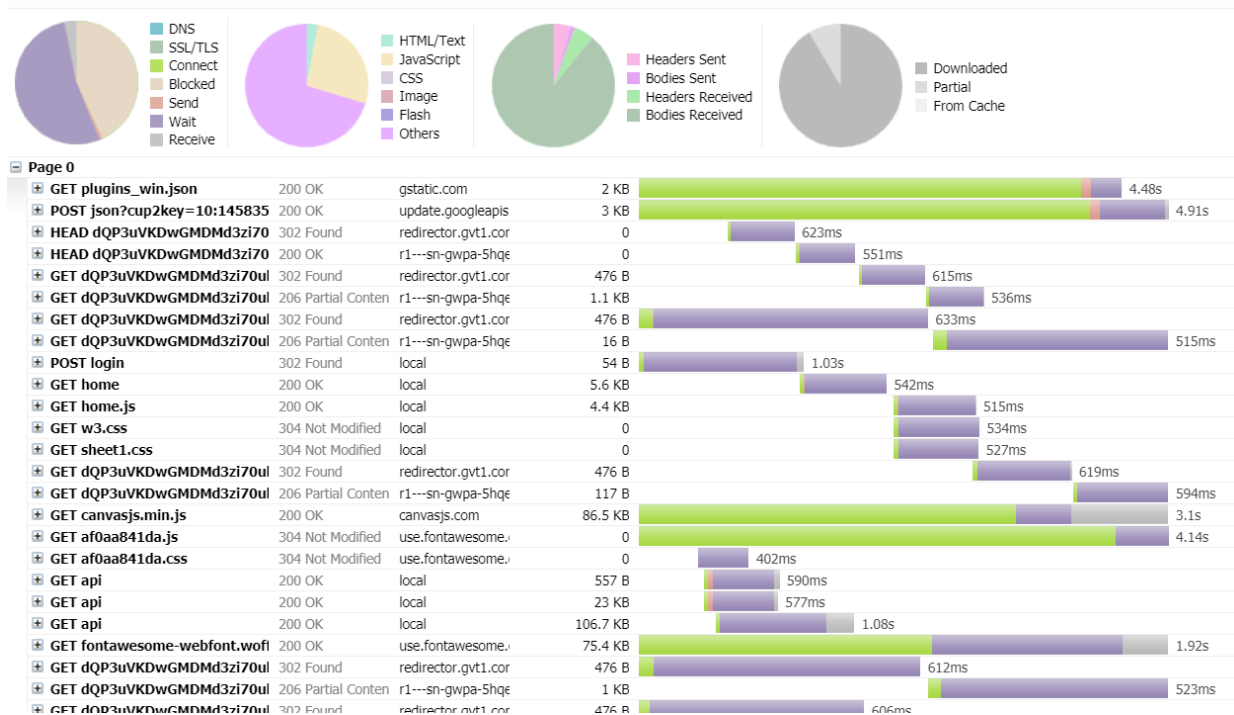
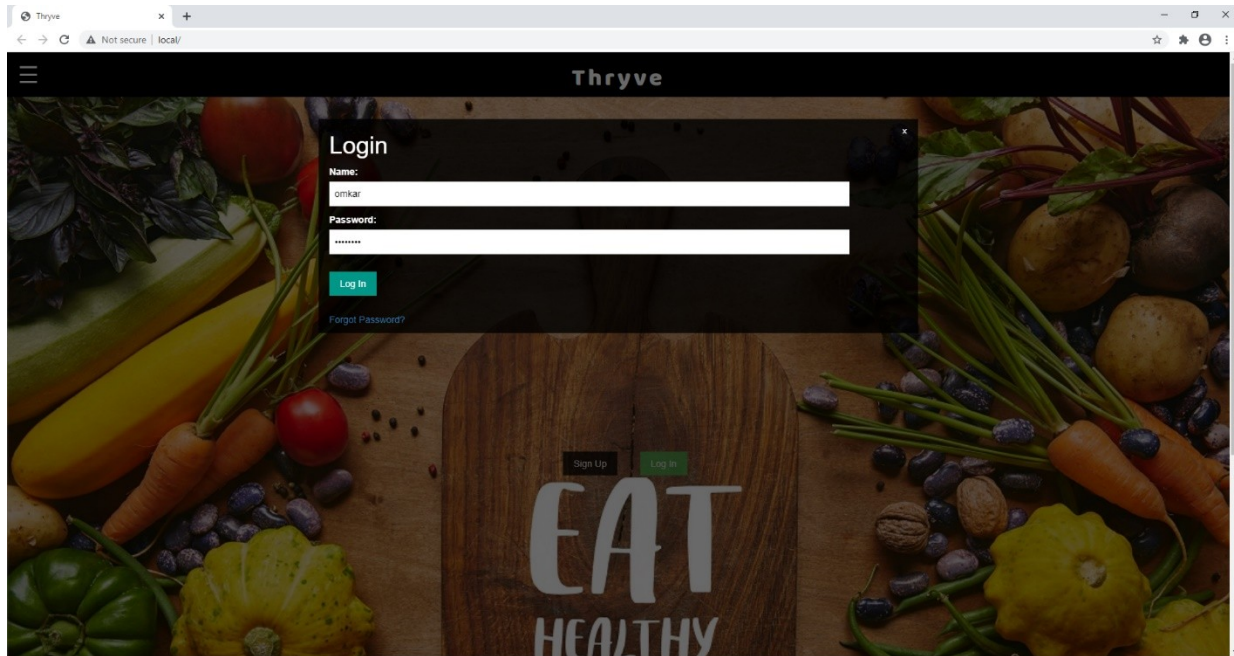
### 2.3.3.1 Sign Up



Link to test results: <https://app.crossbowseresting.com/public/i7a72cdef679cf65/livetests/54574888/8cd60864>



### 2.3.3.2 Login



Link to test results: <https://app.crossbowseresting.com/public/i7a72cdef679cf65/livetests/54575106/0caa3f98>



### 2.3.3.3 Password Reset

Thryve

New Password:

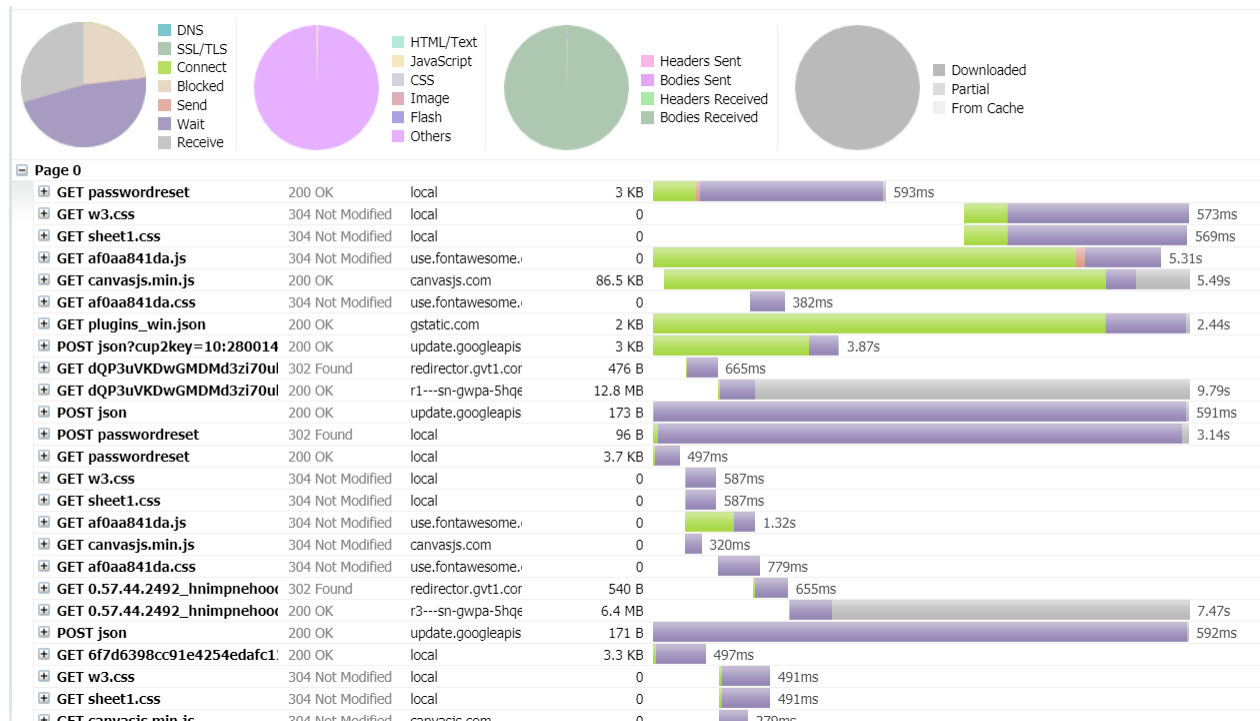
New Password

Confirm Password:

Confirm Password

Update Password

Powered by Thryve™ Inc.



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54575939/bfe86176>

### 2.3.3.4 Diet Page, Autosearch, Filter

Thryve

Search

Fruit ☐ | Vegetable ☐ | Chinese ☐ | Soup ☐ | Dairy ☐ | South Indian ☐ | Juices ☐ | Salad ☐ | Nuts And Seeds ☐ | Egg ☐ | Meat ☐ | Baked ☐ | North Indian ☐ | Bread ☐ |

Protein: Choose your option Fat: Choose your option Carbohydrates: Choose your option

Food Catalogue :

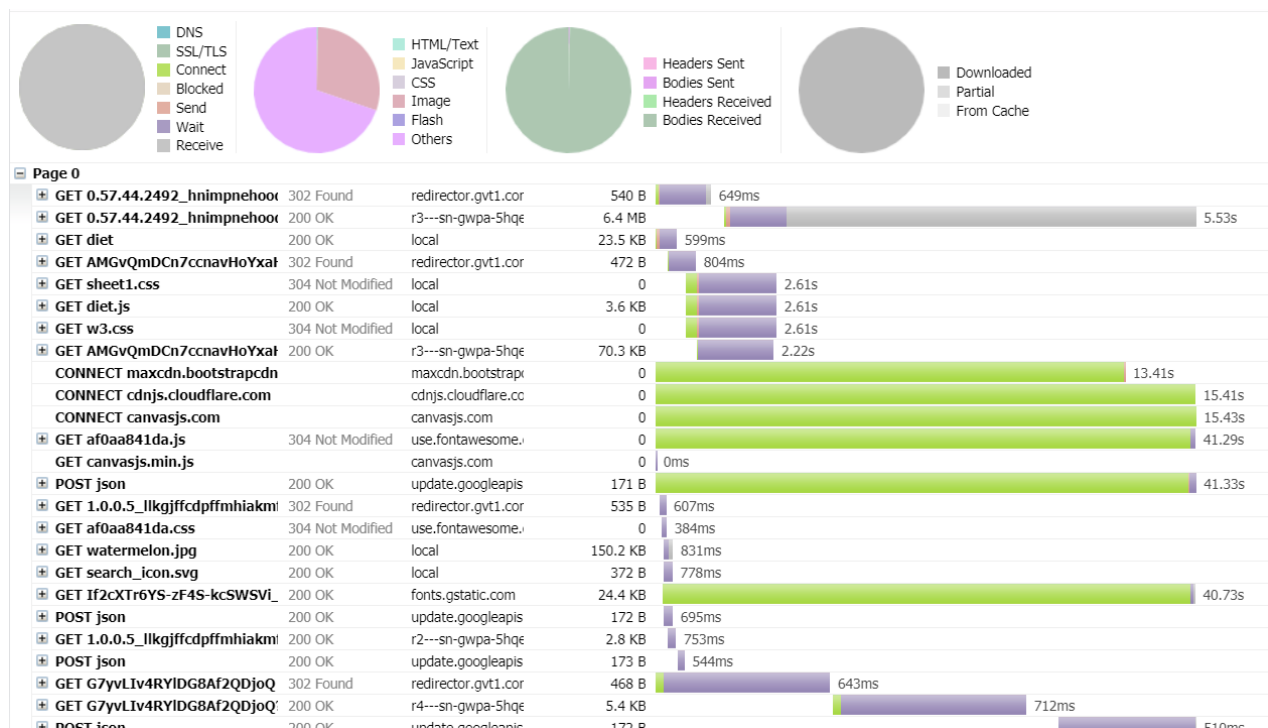
New Food Clear Filters Checkout List

Plain dosa ✓

100 g Add

Plain bagel ✓

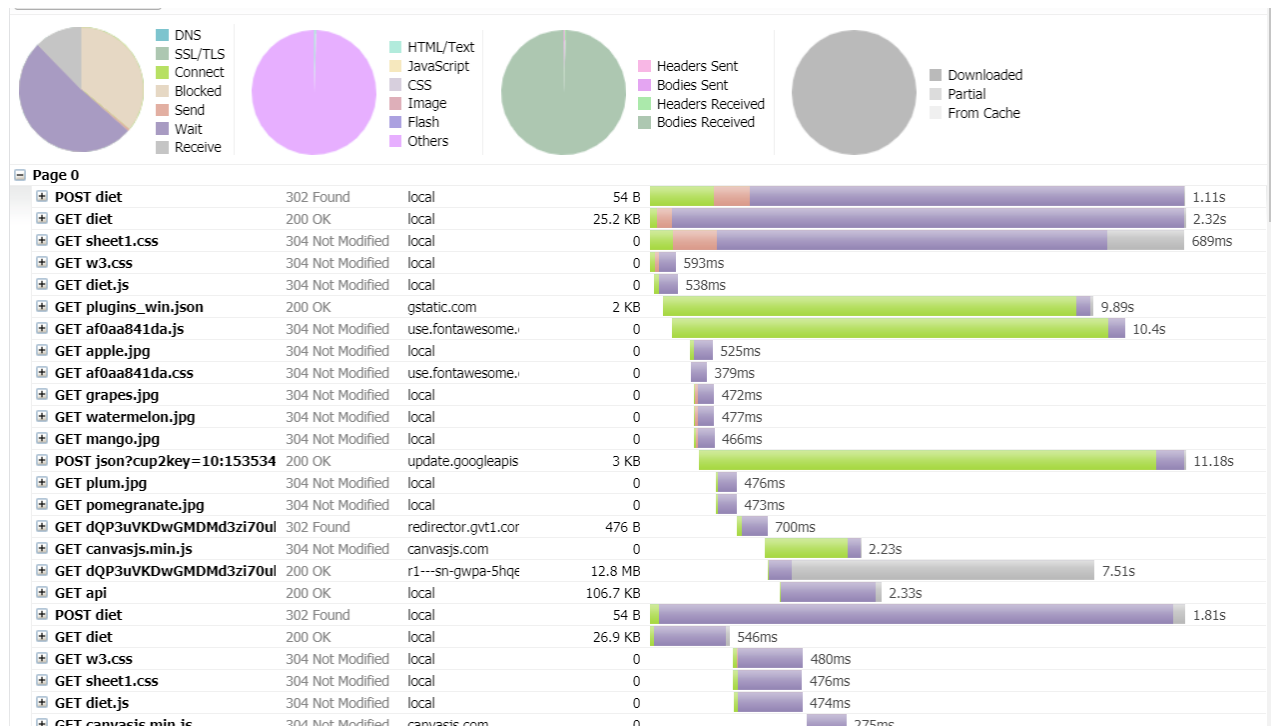
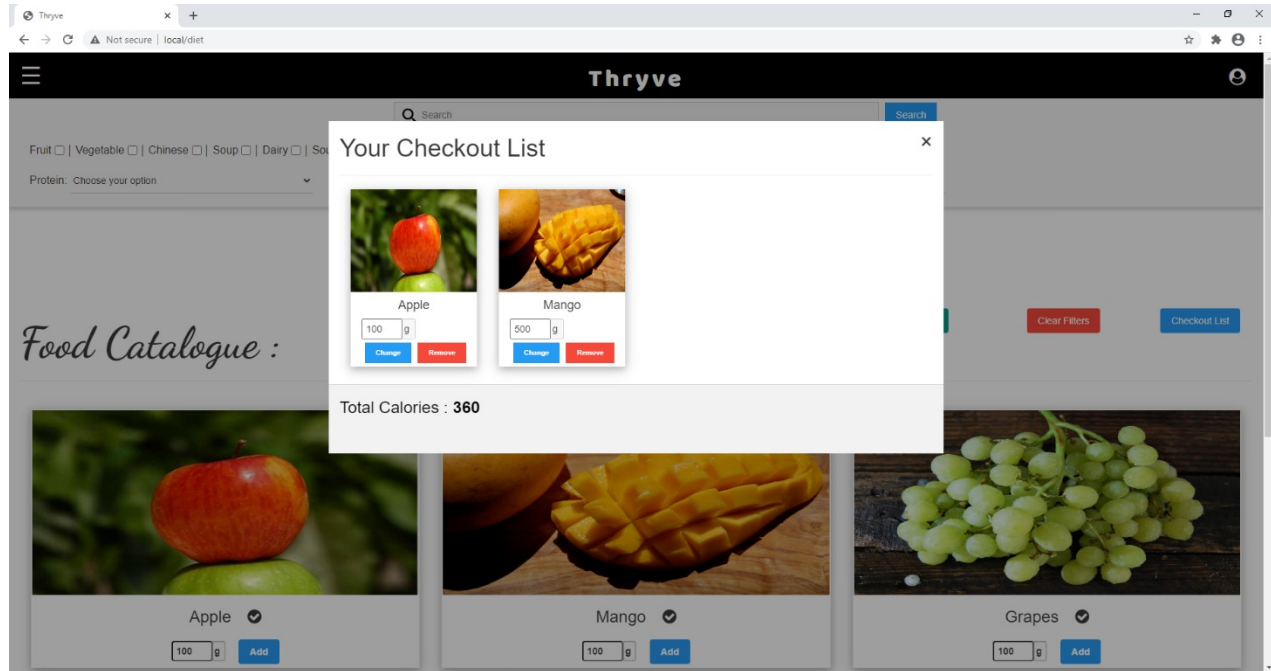
100 g Add



Link to test results:

<https://app.crossbowseresting.com/public/i7a72cdef679cf65/livetests/54576122/8529f137>

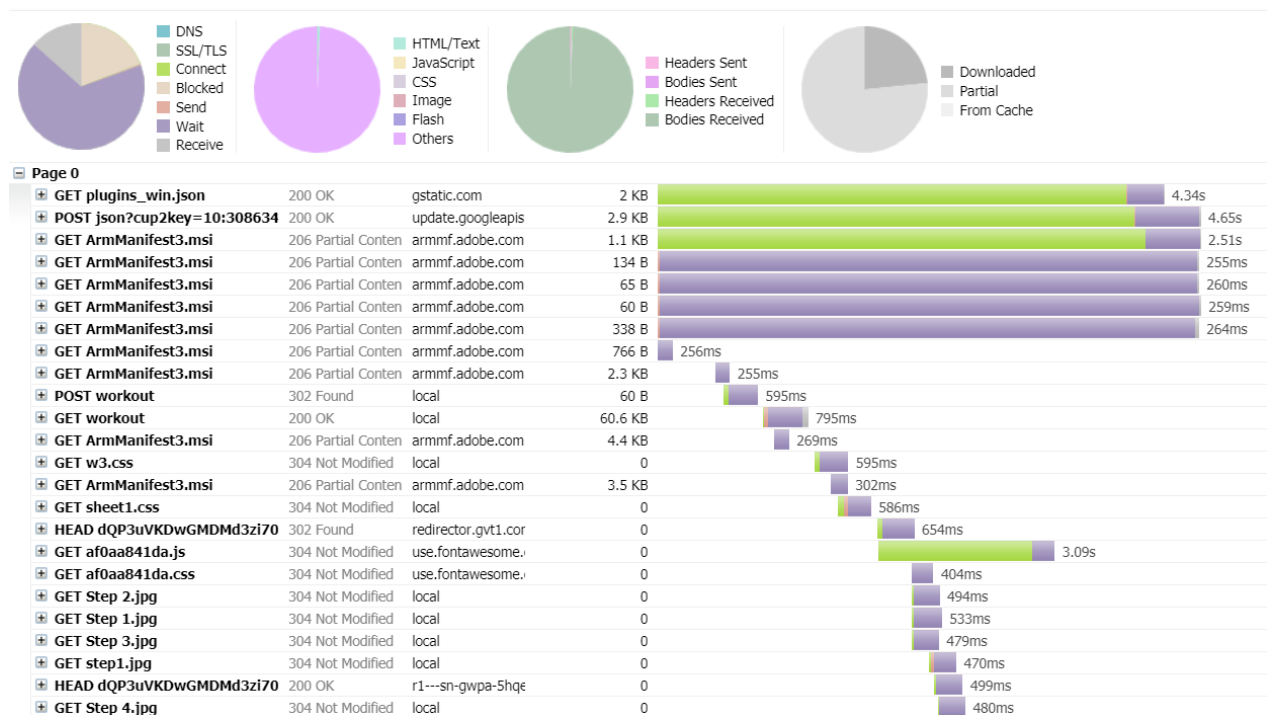
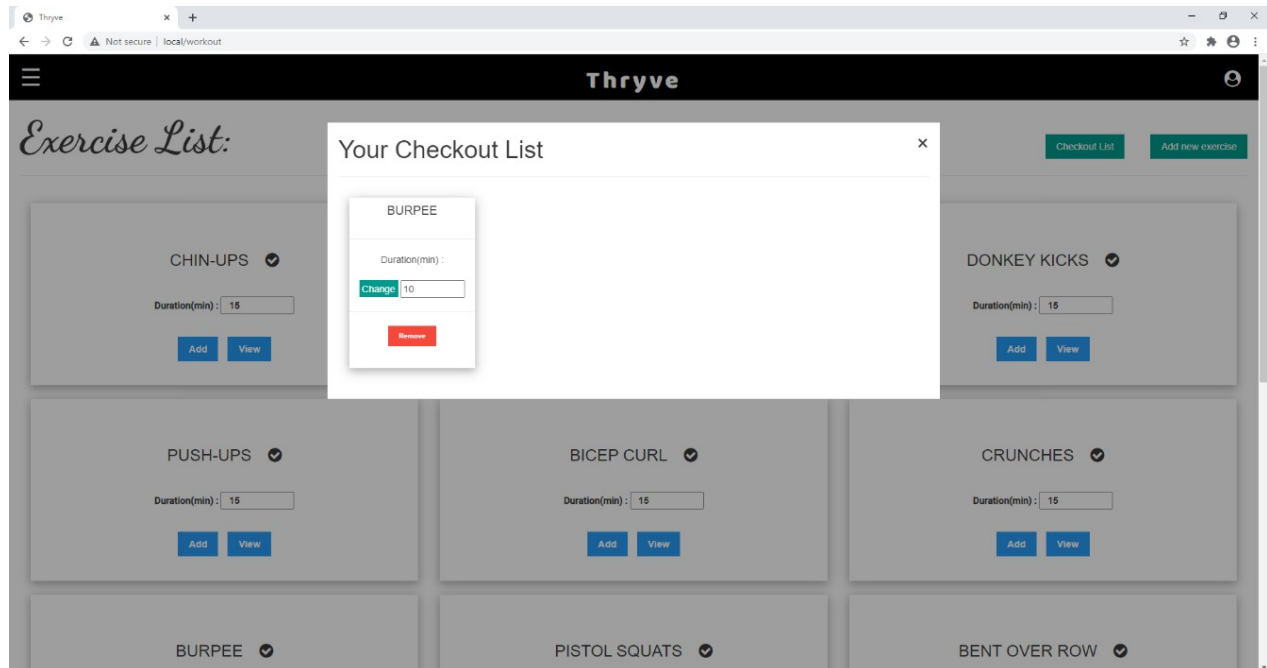
### 2.3.3.5 Diet Page Add, Change, Remove



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54576297/69ac1e5a>

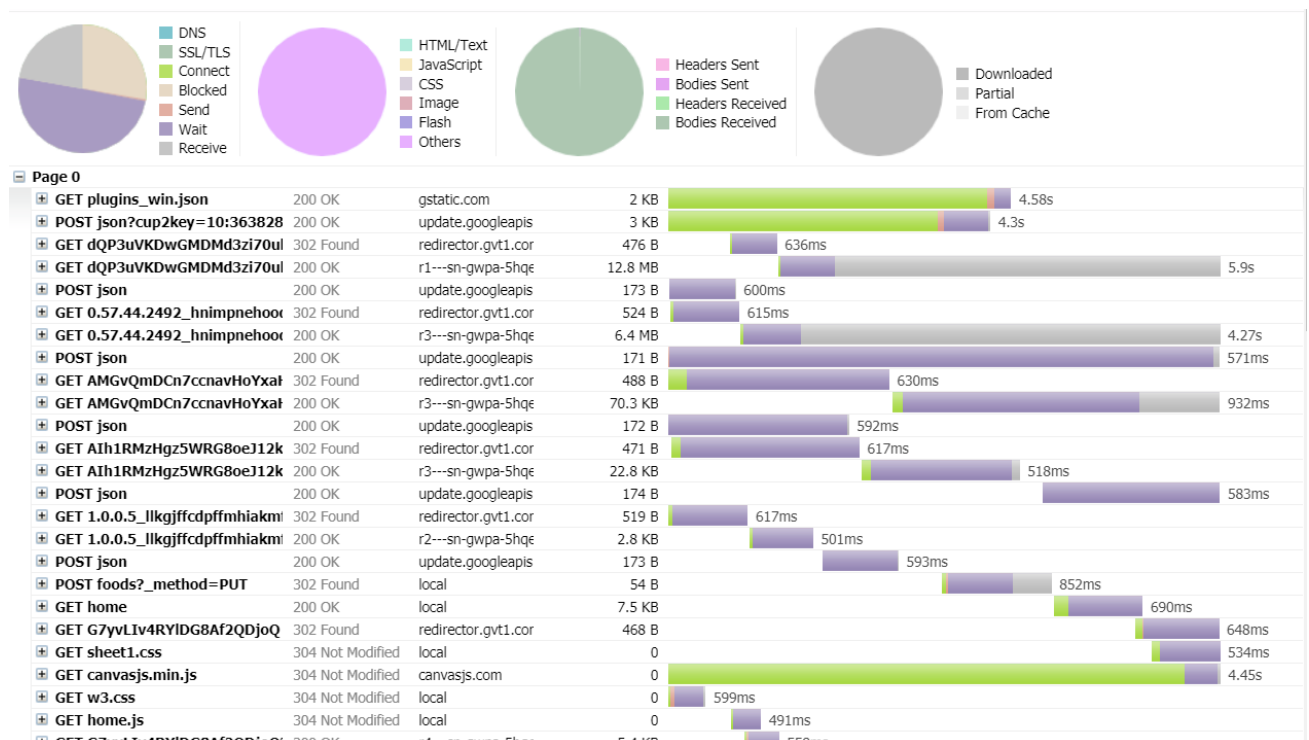
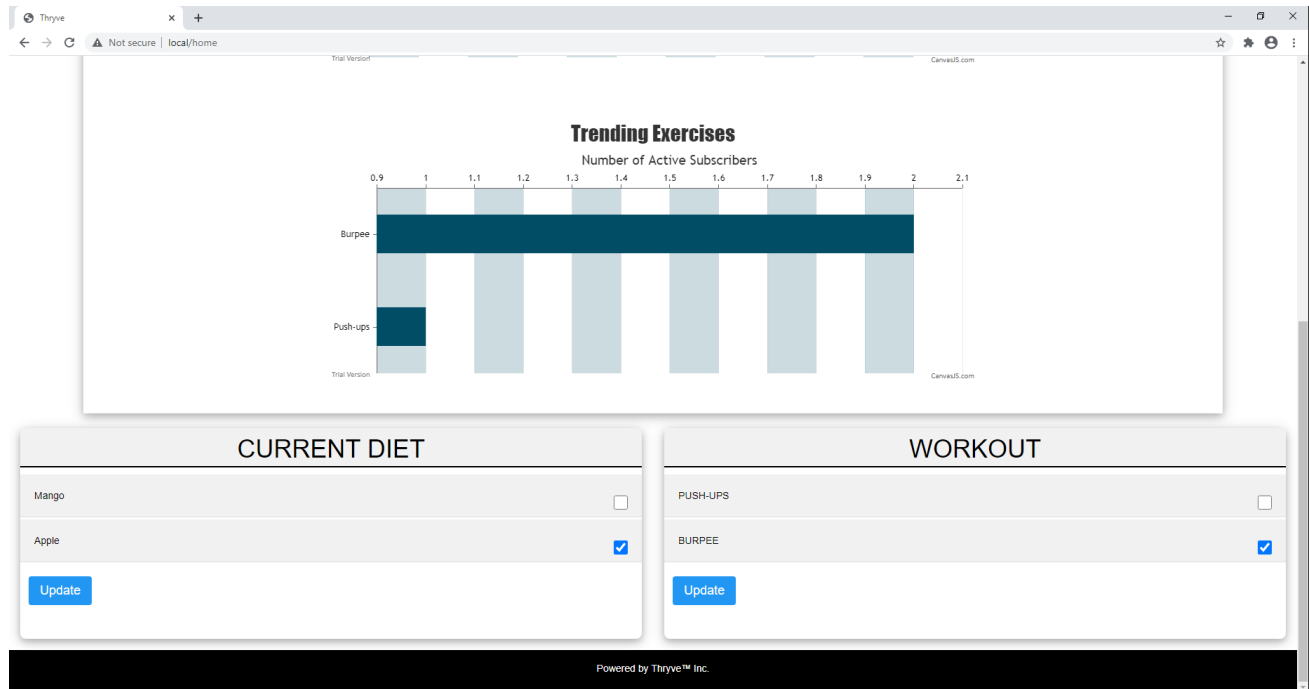
### 2.3.3.6 Workout Builder Page, Add, Change, Remove



Link to test results:

<https://app.crossbowseresting.com/public/i7a72cdef679cf65/livetest/54576688/887eeb45>

### 2.3.3.7 Dashboard, Trending and Checklist



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54576551/46d5e0dc>

### 2.3.3.8 Add Custom Dish

Thryve

Not secure | local/diet/food/new

## Add New Item

Food Name :

Category :

Protein Type :

Fat Type :

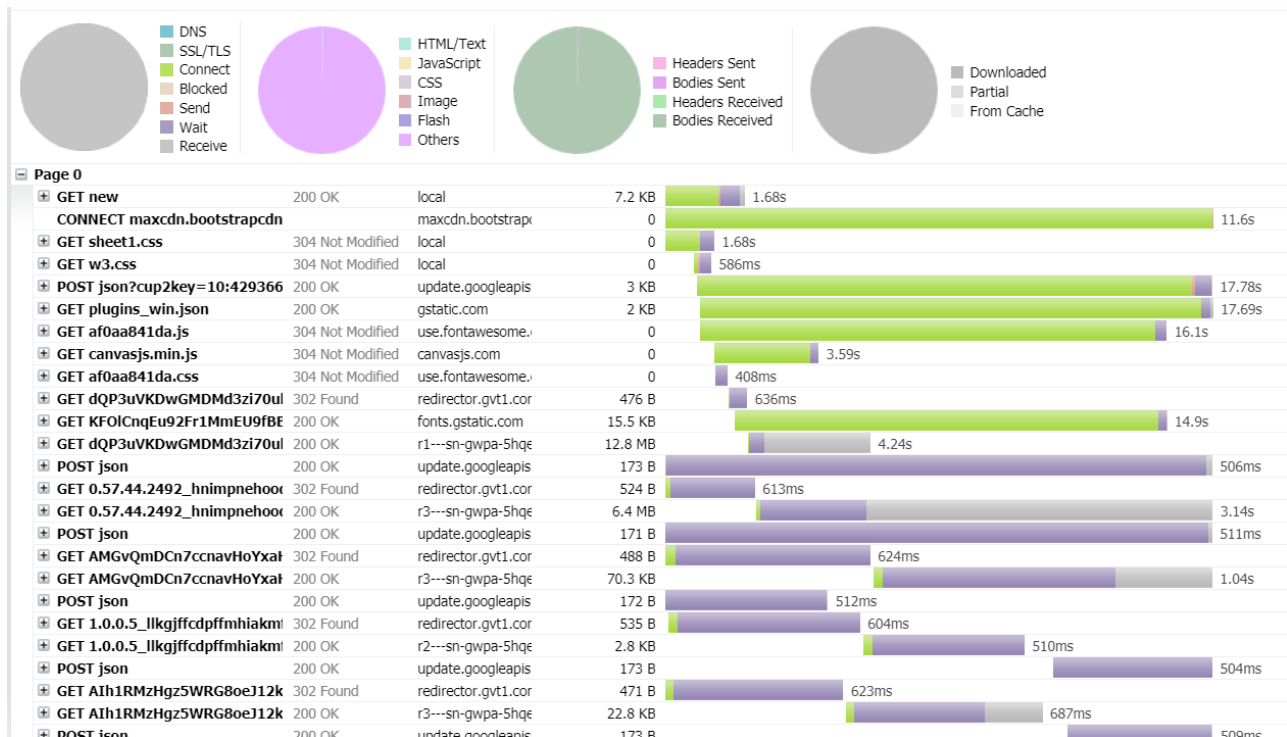
Carbohydrate Type :

Energy(kcal) :

Protein(g) :

Fat(g) :

Carbohydrates(g) :



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54576806/91ae3e08>

### 2.3.3.9 Add Custom Exercise

Thryve

Not secure | local/workout/exercise/new

## Thryve

### New Exercise

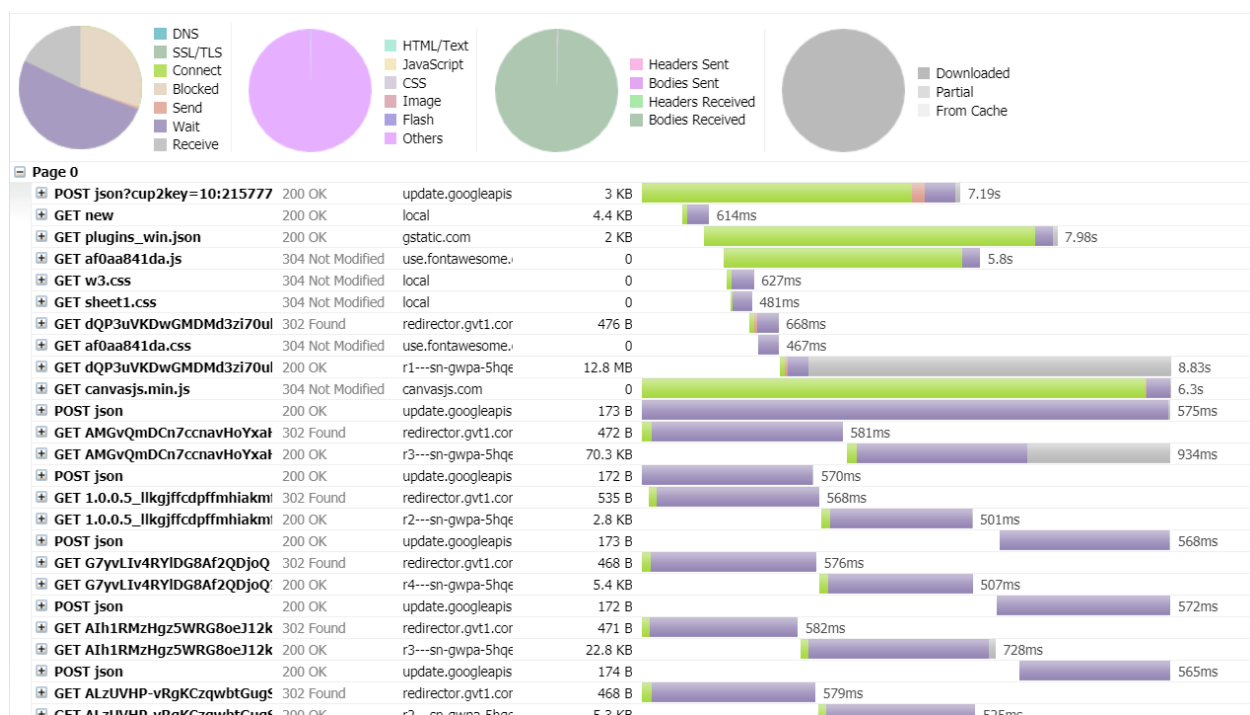
My Exercise

my tag

3

These are the steps

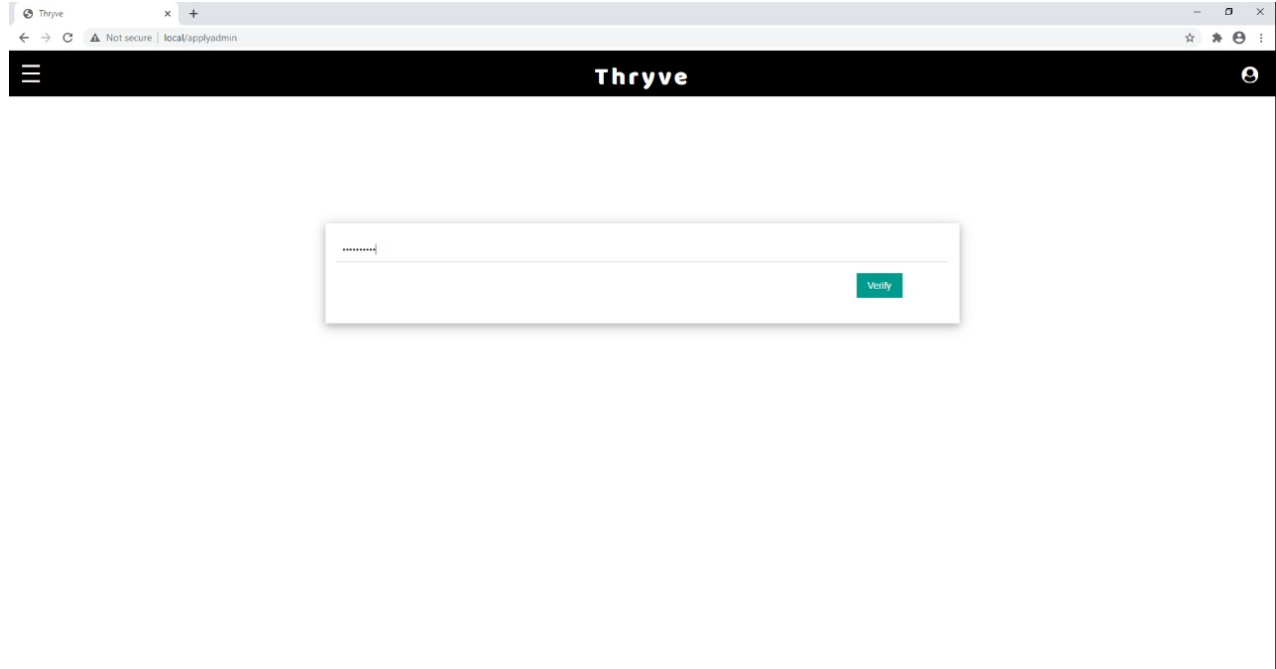
BACK Submit



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54576934/96c64c89>

### 2.3.3.10 Make Admin User

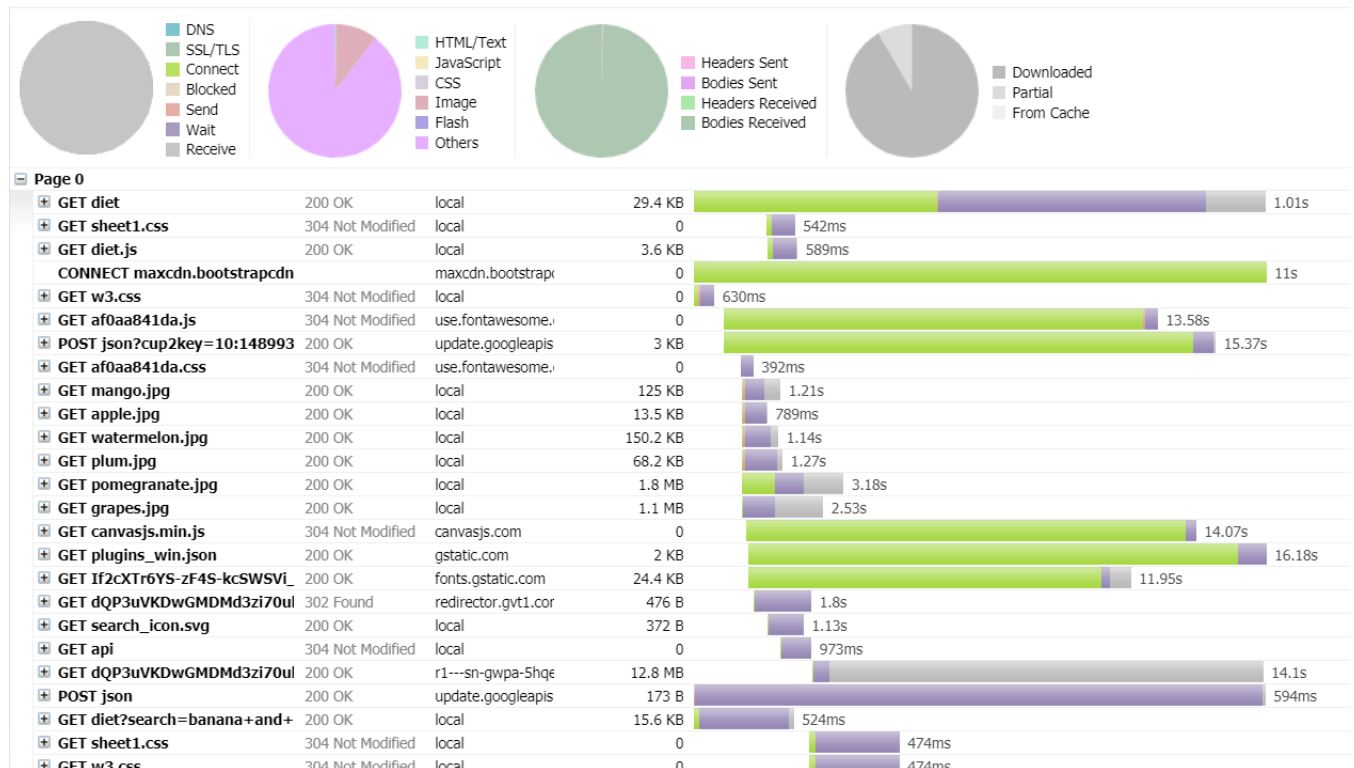
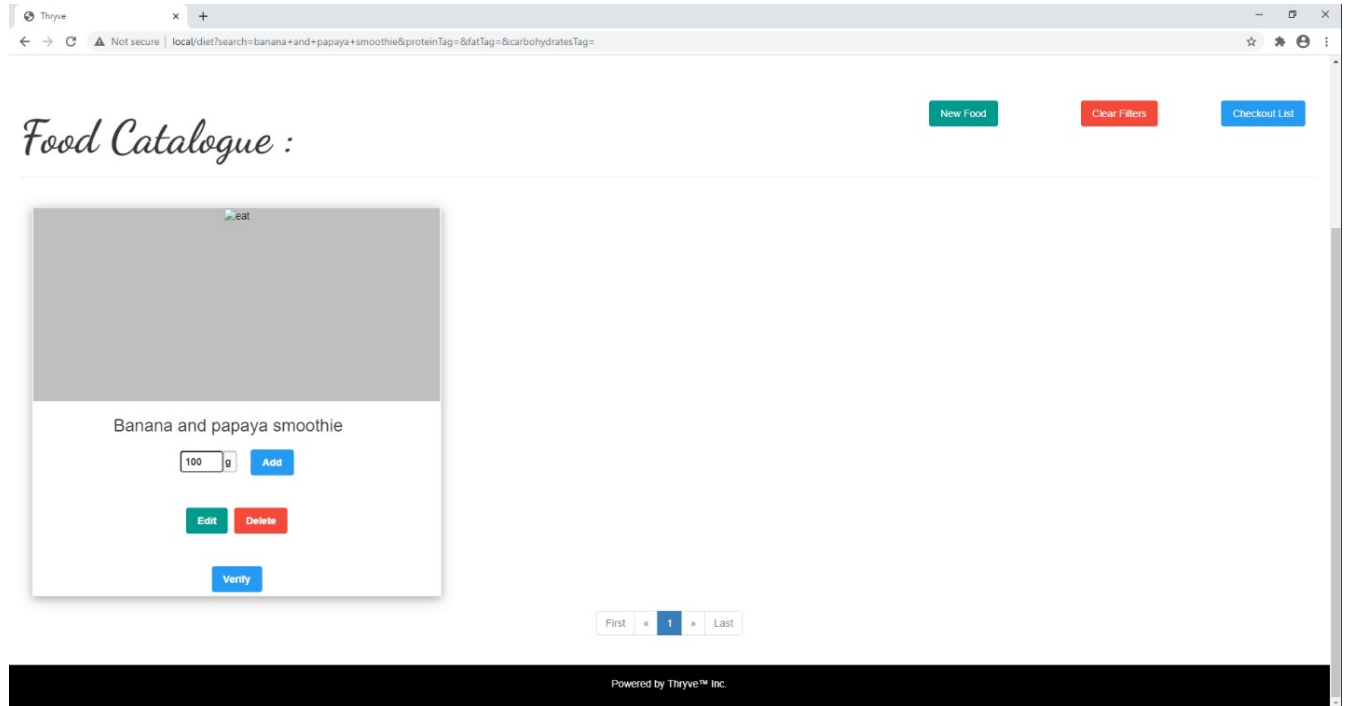


Link to test results:

<https://app.crossbowseresting.com/public/i7a72cdef679cf65/livetests/54577004/fafa018c>



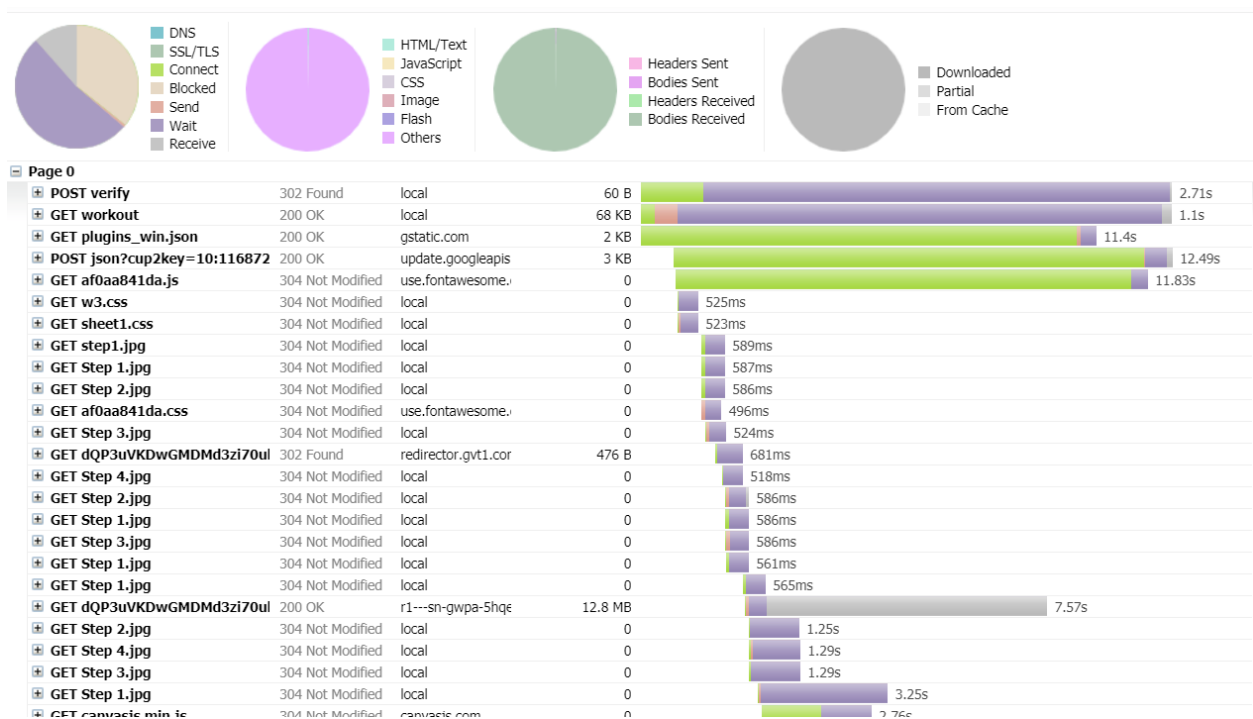
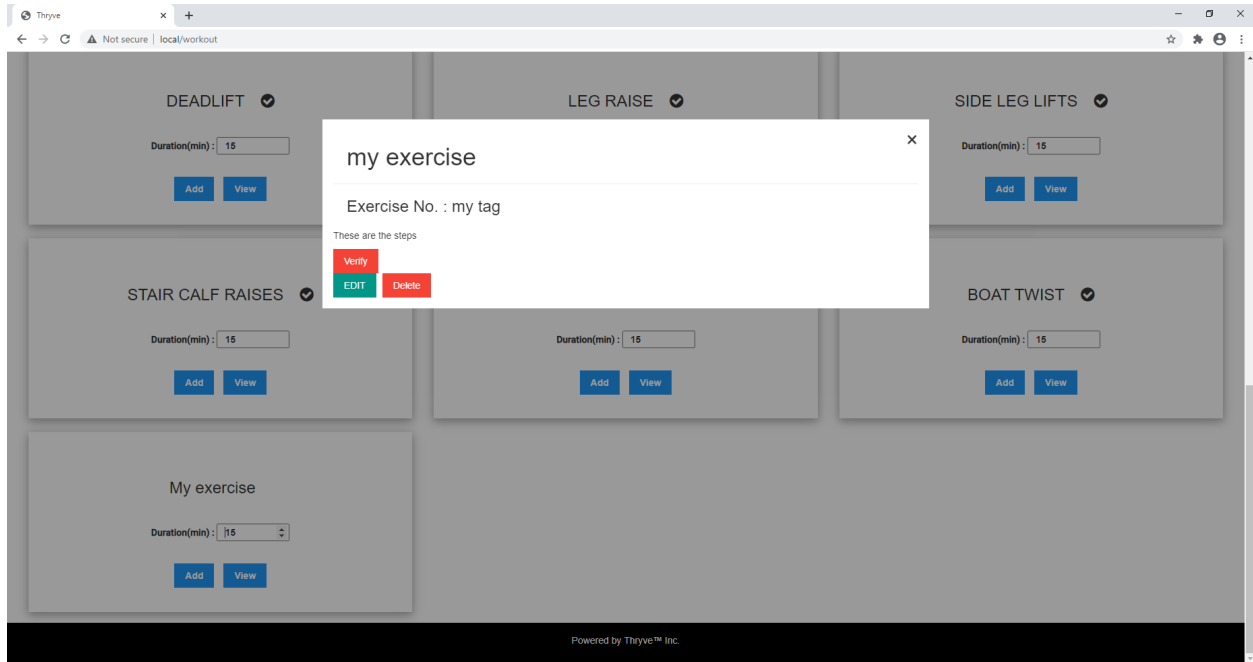
### 2.3.3.11 Verify Custom Dish of User by Admin



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54577183/ff6c1015>

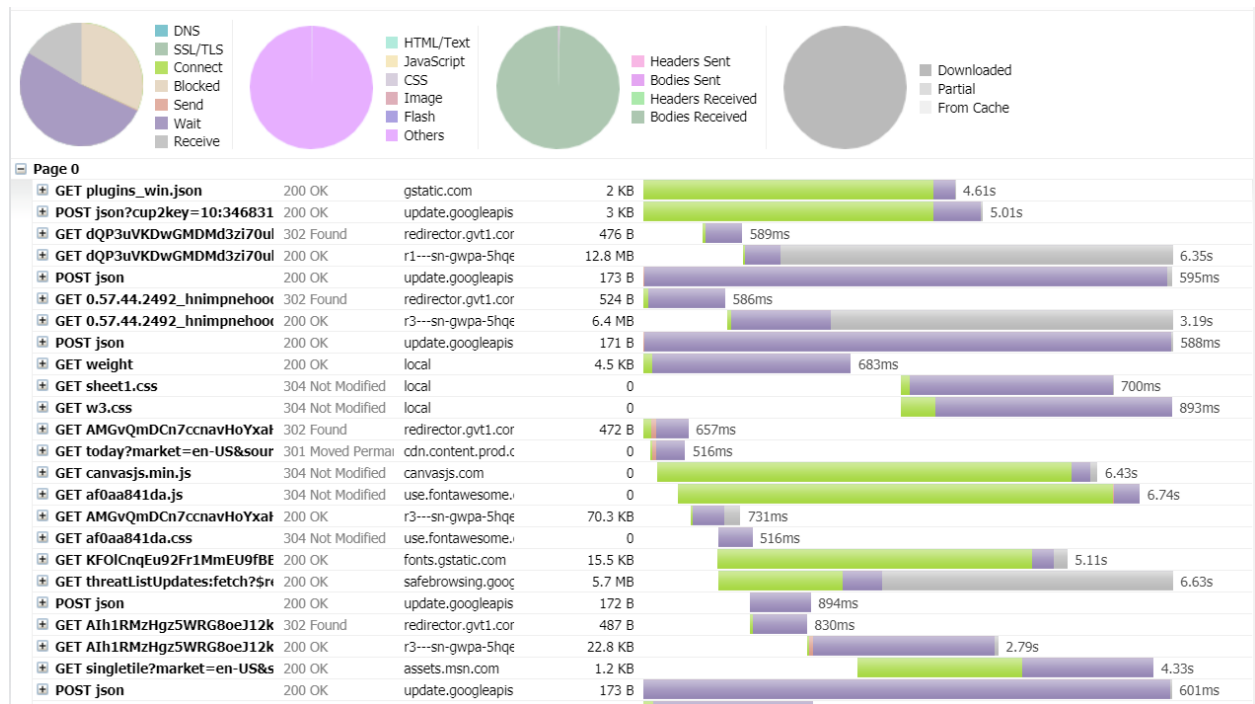
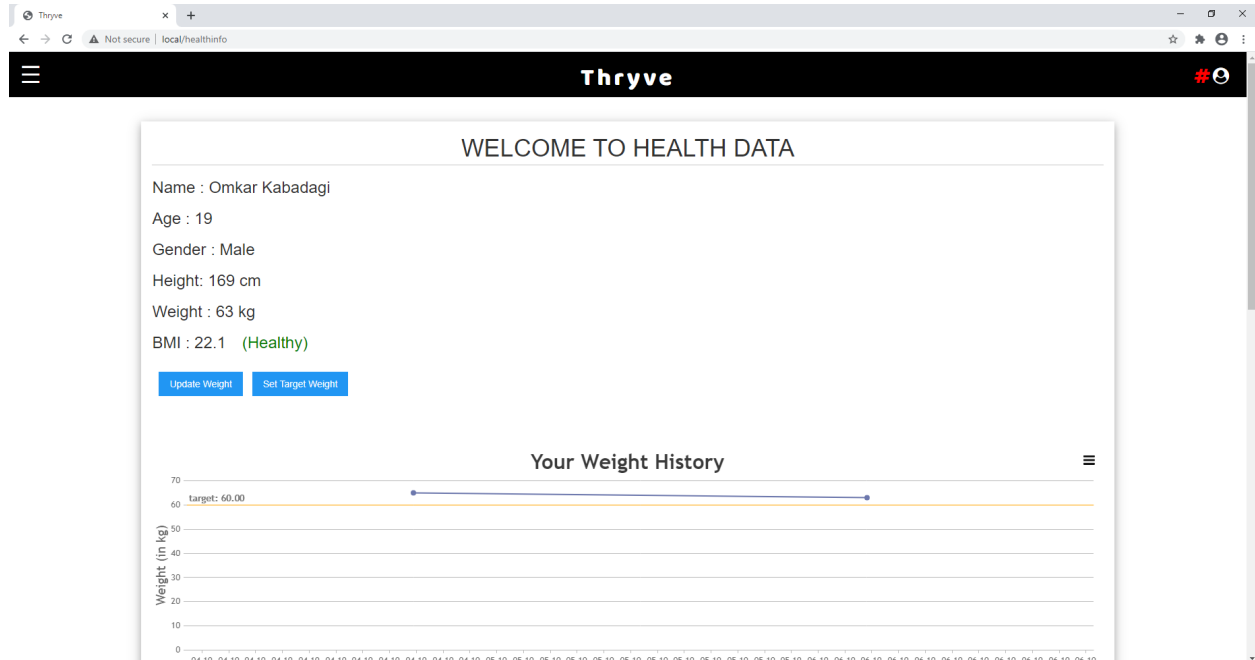
### 2.3.3.12 Verify Custom Exercise of User by Admin



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54578280/9a40f28a>

### 2.3.3.13 Health Info, Update Weight, BP, Sugar



Link to test results:

<https://app.crossbrowsertesting.com/public/i7a72cdef679cf65/livetests/54577393/590c25c7>