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SWDV 691
Service Layers Re-Design
July 23, 2023

What changes were made in the re-design process?

- Revised the endpoint responses:
    - Success responses updated to reflect JSON response format.
    - Addition of erroneous requests/error response messages
- Updated diagram to reflect endpoint updates

Service Endpoints for Healthy Habitude MVP:

1. User Registration
- **Endpoint:** /api/register
- **Purpose:** Allows users to create a new account on the platform.
- **Request:**

> *POST /api/register { "username": "user123", "email": "user123@example.com", "password": "password123" }*

- **Response (Success):**

> *Status: 200 OK { "message": "User registration successful." }*

- **Response (Error - Existing Email):**

> *Status: 409 Conflict { "message": "Email already exists. Please use a different email." }*

2. User Login
- **Endpoint:** /api/login
- **Purpose:** Allows registered users to log in to their accounts.
- **Request:**

> *POST /api/login { "email": "user123@example.com", "password": "password123" }*

- **Response (Success):**

Status: 200 OK { "user_id": "123", "username": "user123", "role": "client" }

- **Response (Error - Invalid Credentials):**

Status: 401 Unauthorized { "message": "Invalid email or password." }

3. View User Profile
- **Endpoint:** /api/profile/{user_id}
- **Purpose:** Allows users to view their own profile information.
- **Request:**

GET /api/profile/123

- **Response (Success):**

Status: 200 OK { "user_id": "123", "username": "user123", "email": "user123@example.com", "role": "client", "subscription_status": "active" }

- **Response (Error - Unauthorized Access):**

Status: 403 Forbidden { "message": "You are not authorized to view this profile." }

4. Create New Goal
- **Endpoint:** /api/goals
- **Purpose:** Allows users to create a new fitness goal.
- **Request:**

POST /api/goals { "title": "Increase Endurance", "description": "Run 5km in 25 minutes.", "start_date": "2023-07-15", "completion_date": "2023-08-15", "increment": "daily" }

- **Response (Success):**

Status: 201 Created { "goal_id": "456", "title": "Increase Endurance", "description": "Run 5km in 25 minutes.", "start_date": "2023-07-15", "completion_date": "2023-08-15", "increment": "daily" }

- **Response (Error - Invalid Data):**

Status: 400 Bad Request { "message": "Invalid date format. Please use 'YYYY-MM-DD' format for dates." }

5. Track Progress

- **Endpoint:** /api/progress/{goal_id}
- **Purpose:** Allows users to track their progress towards a specific goal.
- **Request:**

POST /api/progress/456 { "date": "2023-07-20", "value": "4.8" }

- **Response (Success):**

Status: 200 OK { "date": "2023-07-20", "value": "4.8" }

- **Response (Error - Invalid Data):**

Status: 400 Bad Request { "message": "Invalid progress value. Please enter a valid numeric value." }

6. View Goal Progress

- **Endpoint:** /api/progress_review/{goal_id}
- **Purpose:** Allows users to view their progress history for a specific goal.
- **Request:**

GET /api/progress_review/456

- **Response (Success):**

Status: 200 OK { "progress": [{"date": "2023-07-20", "value": "4.8"}, {"date": "2023-07-22", "value": "4.9"}, {"date": "2023-07-25", "value": "5.0"}] }

- **Response (Error - Unauthorized Access):**

Status: 403 Forbidden { "message": "You are not authorized to view the progress for this goal." }

7. Add New Content

- **Endpoint:** /api/content
- **Purpose:** Allows health and fitness professionals to add new content to their library for clients.
- **Request:**

POST /api/content { "title": "Nutrition Guide", "description": "A comprehensive nutrition guide for weight management.", "type": "PDF", "price": "29.99" }

- **Response (Success):**

Status: 201 Created { "content_id": "789", "title": "Nutrition Guide", "description": "A comprehensive nutrition guide for weight management.", "type": "PDF", "price": "29.99" }

- **Response (Error - Invalid Price):**

Status: 400 Bad Request { "message": "Invalid price. Please enter a valid numeric value for the content." }

8. View Content Library

- **Endpoint:** /api/content
- **Purpose:** Allows users to view the library of health and fitness content.
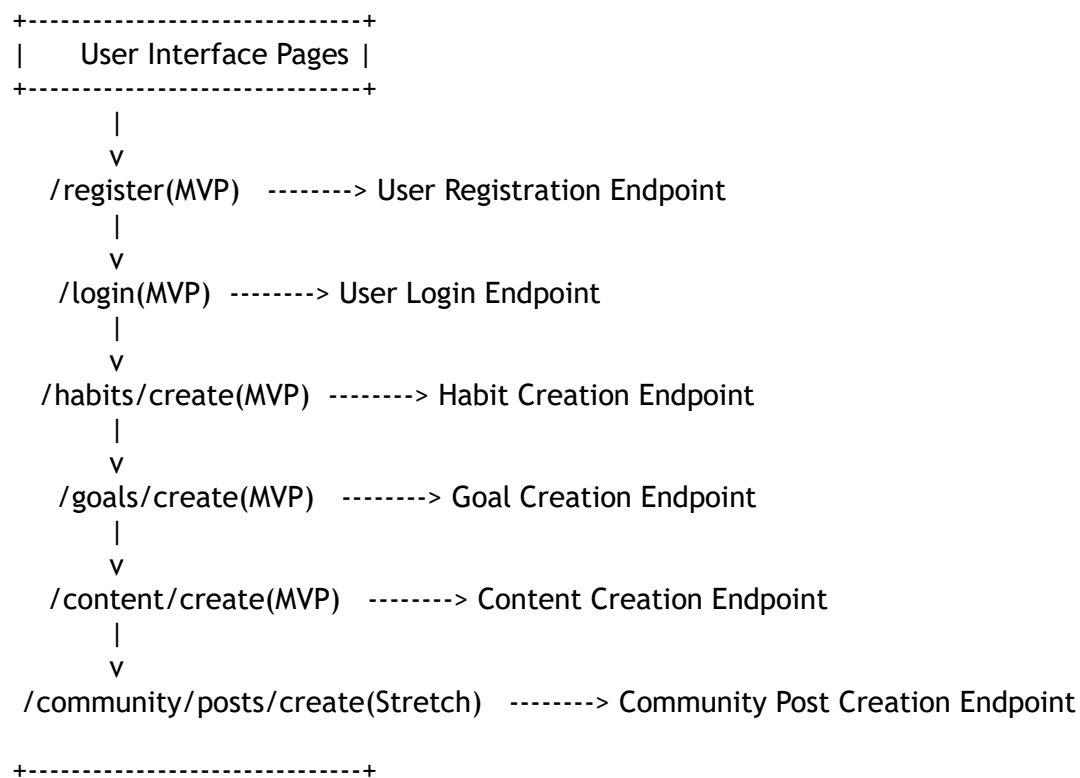- **Request:**

GET /api/content

- **Response (Success):**

Status: 200 OK { "content": [{"content_id": "789", "title": "Nutrition Guide", "type": "PDF", "price": "29.99"}, {"content_id": "123", "title": "Workout Plan", "type": "Video", "price": "19.99"}, {"content_id": "456", "title": "Mindfulness Meditation", "type": "Audio", "price": "9.99"}] }

- **Response (Error - No Content Available):**

Status: 404 Not Found { "message": "No content available in the library." }

Diagram of User Interface Pages and Service Endpoints:

```
+------------------------------+
|     User Interface Pages |
+------------------------------+
         |
         v
   /register(MVP)   --------> User Registration Endpoint
         |
         v
   /login(MVP)  --------> User Login Endpoint
         |
         v
  /habits/create(MVP)  --------> Habit Creation Endpoint
         |
         v
   /goals/create(MVP)   --------> Goal Creation Endpoint
         |
         v
   /content/create(MVP)   --------> Content Creation Endpoint
         |
         v
 /community/posts/create(Stretch)   --------> Community Post Creation Endpoint

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```

The diagram shows the flow of requests from different user interface pages to the corresponding service endpoints. Each page makes requests to the appropriate endpoint based on the user's action or interaction. The arrows indicate the direction of communication, illustrating the interaction between the user interface and the backend services.