**SkillSwap Swap-Mechanism API Documentation**

**Base URL**

The base URL for all API requests is **https://ws24-skillswap.onrender.com**

**API Endpoint: GET /skillswap/:id**

**Description:**

**This endpoint retrieves potential skill swap matches for a specified user. It finds other users whose offered skills match the requesting user's wanted skills and vice versa. The response includes relevant user information along with additional details like the calculated distance between users and the number of completed skill swaps.**

**Path Parameters:**

* **id (required):** The unique identifier of the user requesting potential skill swap matches.

**Access:**

* **Access:** Admins or Users.
* **Authorization:** Required. JWT token must be included in the HTTP-only cookie.

**Response Format:**

* The response is a JSON object containing a message and a list of matched users:

**{**

**"message": "2 Matches found!",**

**"matches": [**

**{**

**"\_id": "5f3fc1d3c28eca5f5e654321",**

**"username": "jane\_doe",**

**"description": "Passionate about painting and languages.",**

**"skillLevel": "intermediate",**

**"isAvailable": true,**

**"swapPreference": ["online", "in-person"],**

**"distance": 3.4, // in kilometers**

**"completedSkillSwaps": 5,**

**"matchingSkills": {**

**"ownSkillOffered": "Spanish",**

**"matchSkillOffered": "Painting"**

**}**

**},**

**{**

**"\_id": "5f3fc1d3c28eca5f5e654322",**

**"username": "john\_smith",**

**"description": "Looking to learn music and teach coding.",**

**"skillLevel": "advanced",**

**"isAvailable": false,**

**"swapPreference": ["online"],**

**"distance": 8.2,**

**"completedSkillSwaps": 2,**

**"matchingSkills": {**

**"ownSkillOffered": "Python",**

**"matchSkillOffered": "Guitar"**

**}**

**}**

**]**

**}**

**Fields:**

* **\_id:** The unique identifier of the matched user.
* **username:** The username of the matched user.
* **description:** A brief description of the matched user.
* **skillLevel:** The skill level of the matched user (e.g., beginner, intermediate, advanced, expert).
* **isAvailable:** A boolean indicating if the matched user is currently available for a skill swap.
* **swapPreference:** An array of preferences for how the matched user likes to conduct skill swaps (e.g., online, in-person).
* **distance:** The calculated distance between the requesting user and the matched user in kilometers.
* **completedSkillSwaps:** The number of skill swaps the matched user has completed that are no longer active.
* **matchingSkills:** An object containing the skills that matched:
  + **ownSkillOffered:** The skill from the requesting user that matched one of the wanted skills of the matched user.
  + **matchSkillOffered:** The skill from the matched user that the requesting user wants to learn.

**Error Responses:**

* **404 Not Found:** If no user is found with the provided id.
  + **Example: {"message": "User not found"}**
* **500 Internal Server Error:** If an error occurs during the execution of the endpoint.
  + **Example: {"message": "An error occurred", "error": "Description of the error"}**

**Notes:**

* This endpoint uses a basic distance calculation in the current implementation, which returns a random value between 0.1 km and 9.9 km. In a production environment, this should be replaced with a real geographic distance calculation based on user coordinates.