Actor Description Table

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| # | Actor | Description |
| 01 | Member | General users who can view and manage basic pond, Koi fish, water parameter information, track fish development, track water parameter, access to post, blog, shop , order. |
| 02 | Manager | Users who can managing products, overseeing posts and articles, handling orders, and have access to the Koi care system similar to a Member. |
| 03 | Admin | System administrators who manage user accounts, and have access to the Koi care system similar to a Member. |

Use Case Table

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| Use Case ID | Use Case | Actors | Description |
| UC-01 | Register Account | Member | Allows users to create new accounts in the system, providing basic profile information. |
| UC-02 | Log In | Member, Manager, Admin | Enables users to securely log into the system. |
| UC-03 | Manage Pond Information | Member, Manager,  Admin | Allows users to add, update, or delete pond details, including name, image, size, depth, volume, drain count, and pump capacity. |
| UC-04 | Manage Koi Fish Information | Member, Manager,  Admin | Allows users to add, update, or delete details of individual Koi fish (name, body shape, age, weight, etc.). |
| UC-05 | Track Water Quality Parameters | Member, Manager | Allows users to input and track water parameters (temperature, salt, pH, O₂, NO₂, NO₃, PO₄) per pond and suggests adjustments when values are substandard. |
| UC-06 | Calculate Feeding Requirements | Member, Manager | System calculates the amount of food needed for each Koi fish at each development stage, based on size, age, and weight. |
| UC-07 | Calculate Salt Requirements | Member, Manager | Calculates the necessary amount of salt for each pond based on pond volume and water quality, to maintain optimal conditions for Koi fish. |
| UC-08 | Order Health/Treatment Products | Member, Manager | Allows users to browse, select, and order products such as water treatment products and fish health supplements. |
| UC-09 | Access News and Blog | Member, Manager,  Admin | Provides a page with news articles, blogs, and tips related to Koi fish care and pond maintenance. |
| UC-10 | View Dashboard & Generate Reports | Manager | Allows managers to access a dashboard and generate reports on fish growth trends, water quality trends, feeding data, and other pond statistics. |
| UC-11 | Generate Development Statistics | Manager | Generates a statistical chart for individual Koi fish or pond-wide trends, displaying growth rates, weight changes, or development insights over time. |
| UC-12 | Manage User Access | Admin | Allows admins to manage user accounts, including assigning roles (Member, Manager), and setting permissions for access to certain data or actions. |
| UC-13 | Manage Product Listings | Manager | Allows admins to add, update, or remove products available for ordering, including water treatments, health supplements, and fish care products. |
| UC-14 | Deactivate User Accounts | Admin | Allows admins to deactivate user accounts that are no longer active or are flagged for any compliance issues. |
| UC-15 | View Pond Information | Member, Manager | Allows users to view detailed information about each pond, such as size, depth, volume, and current water quality parameters. |
| UC-16 | View Koi Fish Profile | Member, Manager | Enables users to view individual profiles for each Koi fish, including name, age, weight, breed, and current pond assignment. |
| UC-17 | Update Profile Information | Member | Allows users to update their personal account information, such as name, email, and profile picture. |
| UC-18 | Log Out | Member, Manager, Admin | Allows users to securely log out of their account. |
| UC-19 | Posting tips post | Manager | Provides a list of tips or FAQs for koi care |
| UC-20 | View Fish Development Chart | Member,  Manager,  Admin | Displays a simple line or bar chart of fish growth, weight, or age over time for selected Koi fish. |