

# Naiki

## Phase 3

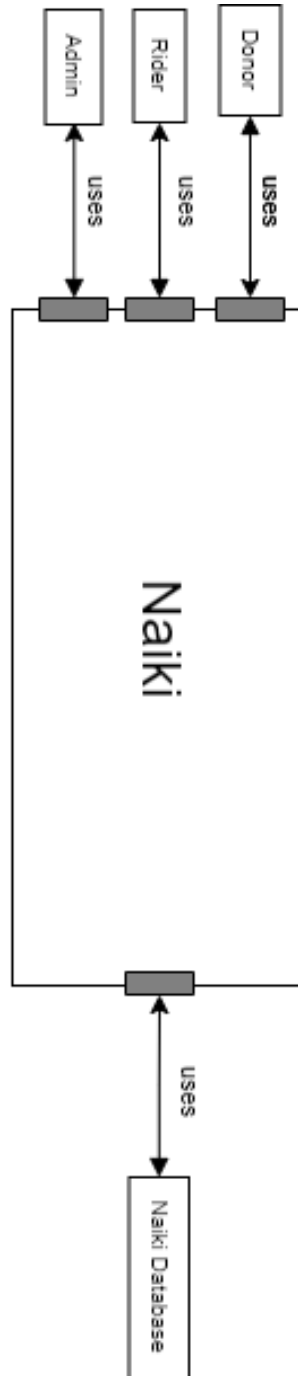
### Team 5

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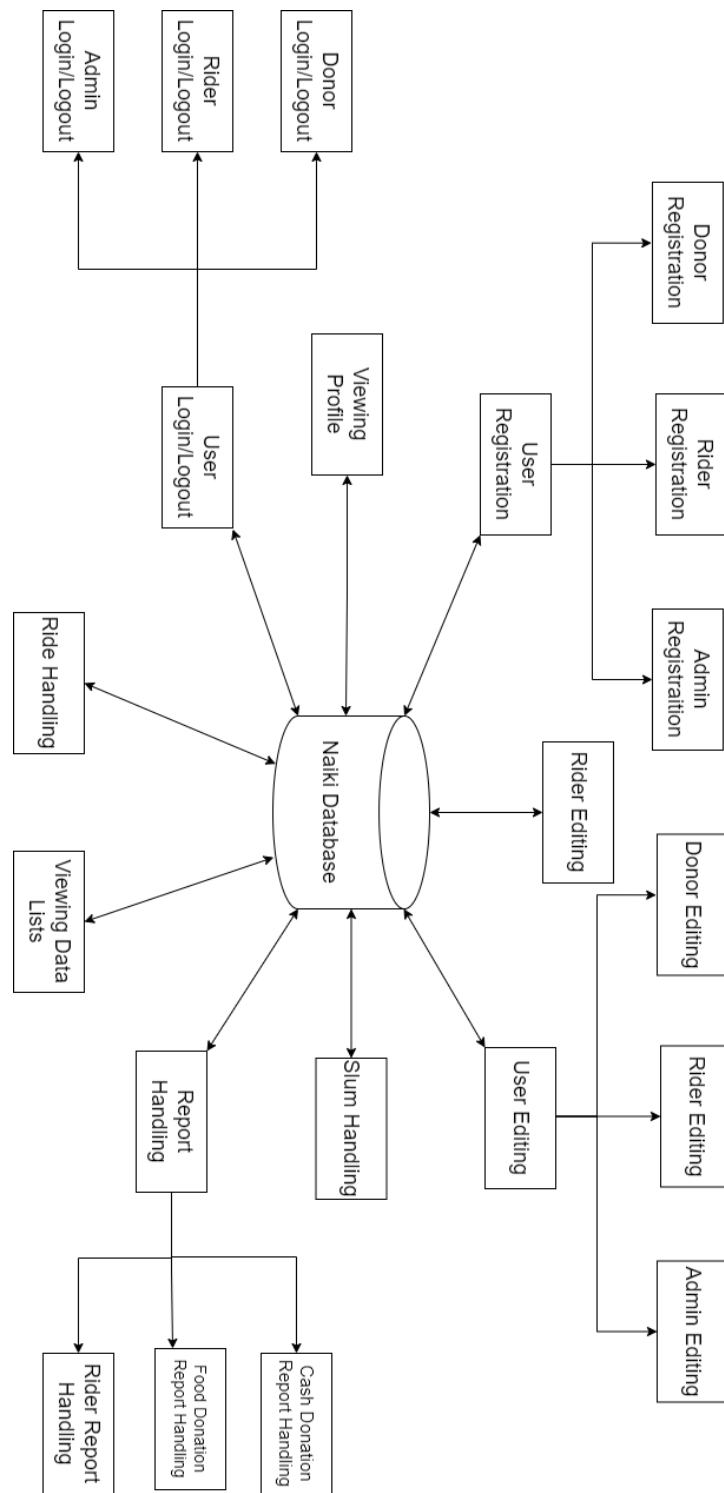
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## 1. Architecture Context Diagram



## 2. Architecture



### 3. Rationale

The primary architectural style being implemented in the Naiki project is the Data-Centered architecture style. The main repository is represented by the Naiki Database, which manages and stores all the relevant data concerning the respective components. This is mainly because all of the components directly interact with the database, with minimum interaction between the components themselves. The data repository serves as the essential means to connect and update the information between the user and the application. Similarly, our project also harnessed the efficacy of the Object Oriented architectural style, which not only allowed greater levels of data encapsulation but also provided layers of abstraction, hence simplifying human-computer interaction. To name an example, the Rider Registration component is a further specification of the User Registration component by relation of inheritance, which is pivotal to the development of object-oriented programming. Further, the User Registration component itself interacts with the Naiki database to sign up the relevant users. The remaining application components follow a similar architectural style, as shown in the detailed architectural style diagram above.

Sr. No.	Component Name	Component Description	Reference Use Cases
1	User Registration	This component adds a user to the appropriate database table based on their role, such as Donor, Rider, or Admin.	<ul style="list-style-type: none"> <li>● UC-1</li> <li>● UC-15</li> <li>● UC-19</li> </ul>
2	Donor Registration	This component registers Donor and adds his/her information to the database table of Donors.	<ul style="list-style-type: none"> <li>● UC-1</li> </ul>
3	Rider Registration	This component registers Rider and adds his/her information to the database table of Riders.	<ul style="list-style-type: none"> <li>● UC-19</li> </ul>
4	Admin Registration	This component registers Admin and adds his/her information to the database table of Admins.	<ul style="list-style-type: none"> <li>● UC-15</li> </ul>
5	User Editing	This component allows the specific user to edit/update relevant fields like username, password.	<ul style="list-style-type: none"> <li>● UC-6</li> <li>● UC-7</li> <li>● UC-8</li> </ul>
6	Donor Editing	This component allows the Donor to edit/update relevant fields like username, password.	<ul style="list-style-type: none"> <li>● UC-6</li> <li>● UC-7</li> <li>● UC-8</li> </ul>
7	Rider Editing	This component allows the Rider to	<ul style="list-style-type: none"> <li>● UC-6</li> </ul>

		edit/update relevant fields like username, phone number, etc.	<ul style="list-style-type: none"> <li>● UC-7</li> </ul>
8	Admin Editing	This component allows the Admin to edit or update relevant fields like password.	<ul style="list-style-type: none"> <li>● UC-6</li> </ul>
9	User Login/ Logout	This component allows the specific User to Login or Logout of the application.	<ul style="list-style-type: none"> <li>● UC-2</li> <li>● UC-10</li> </ul>
10	Donor Login/ Logout	This component allows the Donor to Login or Logout of the application.	<ul style="list-style-type: none"> <li>● UC-2</li> <li>● UC-10</li> </ul>
11	Rider Login/ Logout	This component allows the Rider to Login or Logout of the application.	<ul style="list-style-type: none"> <li>● UC-2</li> <li>● UC-10</li> </ul>
12	Admin Login/ Logout	This component allows the Admin to Login or Logout of the application.	<ul style="list-style-type: none"> <li>● UC-2</li> <li>● UC-10</li> </ul>
13	Slum Handling	This component allows the Admin to add and delete Slum.	<ul style="list-style-type: none"> <li>● UC-22</li> <li>● UC-23</li> </ul>
14	Rider Editing	This component allows Admin to Update the profile of Rider, or delete it.	<ul style="list-style-type: none"> <li>● UC-20</li> <li>● UC-21</li> </ul>
15	Ride Handling	This component is used by Donor and Rider and it acts as the main component. This allows Donor to Request a ride, or Cancel it after requesting. And it allows Rider to Review Requests, Cancel Ride, or End it.	<ul style="list-style-type: none"> <li>● UC-3</li> <li>● UC-4</li> <li>● UC-11</li> <li>● UC-12</li> <li>● UC-24</li> </ul>
16	Report Handling	This component is used by the Admin to view Cash Donation, Food Donation, and Riders Reports.	<ul style="list-style-type: none"> <li>● UC-14</li> </ul>
17	Cash Donation Report Handling	This component is used by Admin to view Cash Donation Reports.	<ul style="list-style-type: none"> <li>● UC-14</li> </ul>
18	Food Donation Report Handling	This component is used by Admin to view Food Donation Reports.	<ul style="list-style-type: none"> <li>● UC-14</li> </ul>
19	Rider Report	This component is used by Admin to	<ul style="list-style-type: none"> <li>● UC-14</li> </ul>

	Handling	view Riders Reports.	
20	Viewing Data Lists	This component allows the Admin to view the list of Donors, Riders and Slums.	<ul style="list-style-type: none"><li>● UC-16</li><li>● UC-17</li><li>● UC-18</li></ul>
21	Viewing Profile	This component allows Users to view their own profile or the profiles of other users of the application. Rider, for example, can view the profile of the Donor with whom they have a Ride. Donors can also view the Rider Profile of the person who will be picking up the food. Admin can view the profile of any Rider.	<ul style="list-style-type: none"><li>● UC-5</li><li>● UC-13</li><li>● UC-25</li></ul>
22	Naiki Database	Naiki Database is our central and only database/data repository component in this project. It has different tables to store all the data.	

## **4. Reference**

Note: The reference has been included to minimize cross-checking from Phase I (use-cases) and simplify the process of understanding which component is related to which specific use case. Furthermore, a couple of use cases, for example, 24. Cancel Ride, were missing from the original Phase I submission; hence this reference now includes them as part of the final deliverable.

UC-1: Sign Up

UC-2: Log In

UC-3: Request Ride

UC-4: Cancel Request

UC-5: View Rider Profile

UC-6: Update Password

UC-7: Update Phone Number

UC-8: Update Address

UC-9: Donate Money

UC-10: Log Out

UC-11: Review Request

UC-12: End Ride

UC-13: View Donor's Profile

UC-14: View Reports

UC-15: Add Admin

UC-16: View List of Riders

UC-17: View List of Donors

UC-18: View List of Slums

UC-19: Add Rider

UC-20: Update Rider

UC-21: Delete Rider

UC-22: Delete Slum



UC-23: Add Slum

UC-24: Cancel Ride

UC-25: View Admin Profile