

Data Plan

Group Number: UG_Group 98

| Feature/Interaction | Purpose/Description | Request Data Source | Request Sent to Server | Processing Needed/Response Data Source | Response Sent to Client | Request Type & Path | Other Notes |
|--|---|---|---|--|---|---|--------------------------------------|
| - User Registration (Volunteer/Organization) | Create a new user account with specific role | User Input (Signup form) | - User Type (Volunteer/Organization) Name Email Password (hashed) Location Bio Skills Interests (Optional for Volunteer) | - Validate user data - Create new user entry in User table with assigned role | - User ID Success/Error message | POST /api/users/register | Implement secure password hashing |
| User Login | Authenticate existing user | User Input (Login form) | - Email Password | - Verify email and password against User table | - User ID (if successful) Error message (if failed) | POST /api/users/login | Use secure session management |
| - Create Opportunity | Create a new volunteer opportunity | User Interface (Opportunity creation form) | Title Description Category Location- Skills(required) Dates/Times Capacity (optional) | Validate opportunity details Create new entry in Opportunity table | - Opportunity ID Success/Error message | POST /api/opportunities | |
| - Manage Applications | Review applications and registrations for opportunities | User Interface (Opportunity management dashboard) | - Opportunity ID | - Retrieve applications and registrations for the opportunity | - List of applicants (Name, Skills) Registration details (if applicable) | GET /api/opportunities/{opportunity_id}/applications | Secure access for Organizations only |

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| - Update Opportunity Status | Mark an opportunity as Open, Closed, or Full | User Interface (Opportunity management dashboard) | - Opportunity ID- New Status | - Update opportunity status in Opportunity table | - Confirmation message | PUT /api/opportunities/{opportunity_id}/status | |
| - View Upcoming Registrations | See a list of upcoming volunteer opportunities | User Interface (Dashboard) | - User ID | - Retrieve upcoming registrations from Interactions table | - List of upcoming opportunities (Title, Date/Time, Organization) | GET /api/users/{user_id}/registrations | Authentication required |
| - View Past Opportunities | See a list of past volunteer experiences | User Interface (Dashboard) | - User ID | - Retrieve past interactions (Action: "Registered") from Interactions table | - List of past opportunities (Title, Date/Time, Organization) | GET /api/users/{user_id}/history | Authentication required |
| - Send Message (Organization to Volunteer) | Communicate with registered volunteers for an opportunity | User Interface (Messaging tool) | - Opportunity ID - Recipient User ID - Message content | - Validate access and permissions Send message notification | - Confirmation message | POST /api/messages | Secure access for Organizations only |
| - Receive Notifications (Volunteer) | Get alerts about opportunity updates, messages, etc. | | | | - Opportunity updates (status changes, messages) New application confirmations | - Push notifications or in-app alerts | |