<u>Covid Tracking</u>

Controllers

1. <u>CovidDetailController</u>
   Purpose: Manages COVID-19 case details.
   Endpoints**:
   - `GET /`: Retrieves all COVID-19 details.
   - `GET /{id}`: Retrieves a specific COVID-19 detail by its ID.
   - `GET /by-member/{memberId}`: Retrieves COVID-19 details for a specific member.
   - `POST /`: Adds a new COVID-19 detail.
   - `PUT /{id}`: Updates an existing COVID-19 detail.
   - `DELETE /{id}`: Deletes a COVID-19 detail.
   - `GET /active-patients-count-last-month`: Retrieves the count of active patients in the last month.

2. <u>MemberController</u>
   Purpose: Manages member information.
   Endpoints:
   - `GET /`: Retrieves all members.
   - `GET /{id}`: Retrieves a specific member by ID.
   - `GET /by-identity-number/{identityNumber}`: Retrieves a member by their identity number.
   - `POST /`: Adds a new member.
   - `PUT /{id}`: Updates an existing member.
   - `DELETE /{id}`: Deletes a member.

3. <u>VaccinationController</u>
   Purpose: Manages vaccination records.
   Endpoints:
   - `GET /`: Retrieves all vaccination records.
   - `GET /{id}`: Retrieves a specific vaccination record by ID.
   - `GET /by-member/{memberId}`: Retrieves vaccination records for a specific member.
   - `POST /`: Adds a new vaccination record.
   - `PUT /{id}`: Updates an existing vaccination record.
   - `DELETE /{id}`: Deletes a vaccination record.
   - `GET /not-vaccinated-members-count`: Retrieves the count of members not vaccinated.

Services

1. CovidDetailService: Provides business logic for managing COVID-19 details.
2. MemberService: Provides business logic for managing member information.
3. VaccinationService: Provides business logic for managing vaccination records.

Repositories

1. CovidDetailRepository: Handles data access for COVID-19 details, including CRUD operations and specific queries like active patient counts.
2. MemberRepository: Handles data access for member information, including CRUD operations and lookups by identity number.
3. VaccinationRepository: Handles data access for vaccination records, including CRUD operations, and queries for vaccination status.

General Flow

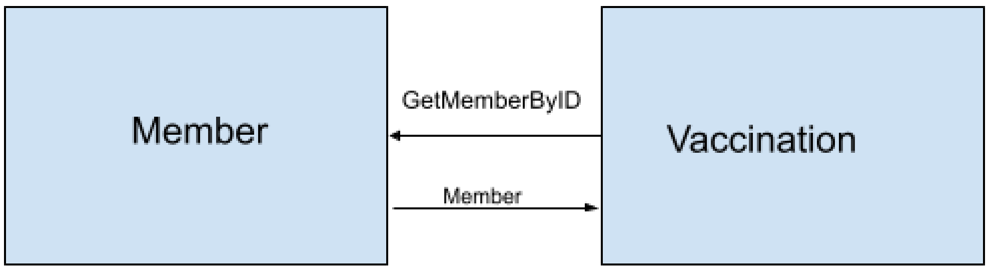
1. **Controllers** act as the entry point for HTTP requests, using **Services** to process business logic.
2. **Services** interact with **Repositories** to perform CRUD operations on the database.
3. **Repositories** are responsible for direct data access and manipulation in the database.

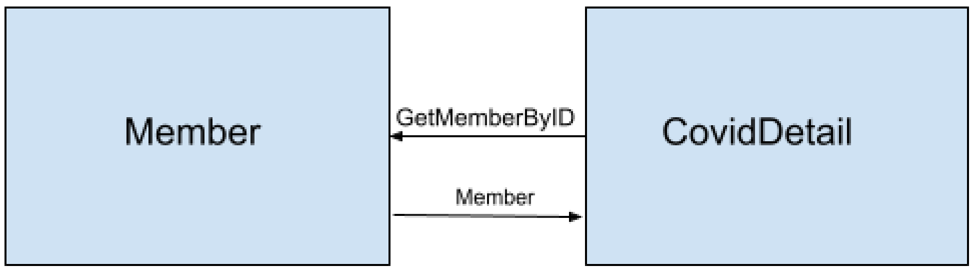
Error Handling
All controllers handle errors by returning appropriate HTTP status codes (e.g., 404 for Not Found, 500 for Internal Server Error) and encapsulate the business logic in try-catch blocks to manage exceptions gracefully.

Mapping
AutoMapper is used in controllers to map between entity models (database models) and DTOs (Data Transfer Objects) to abstract away the database structure from the API consumers.

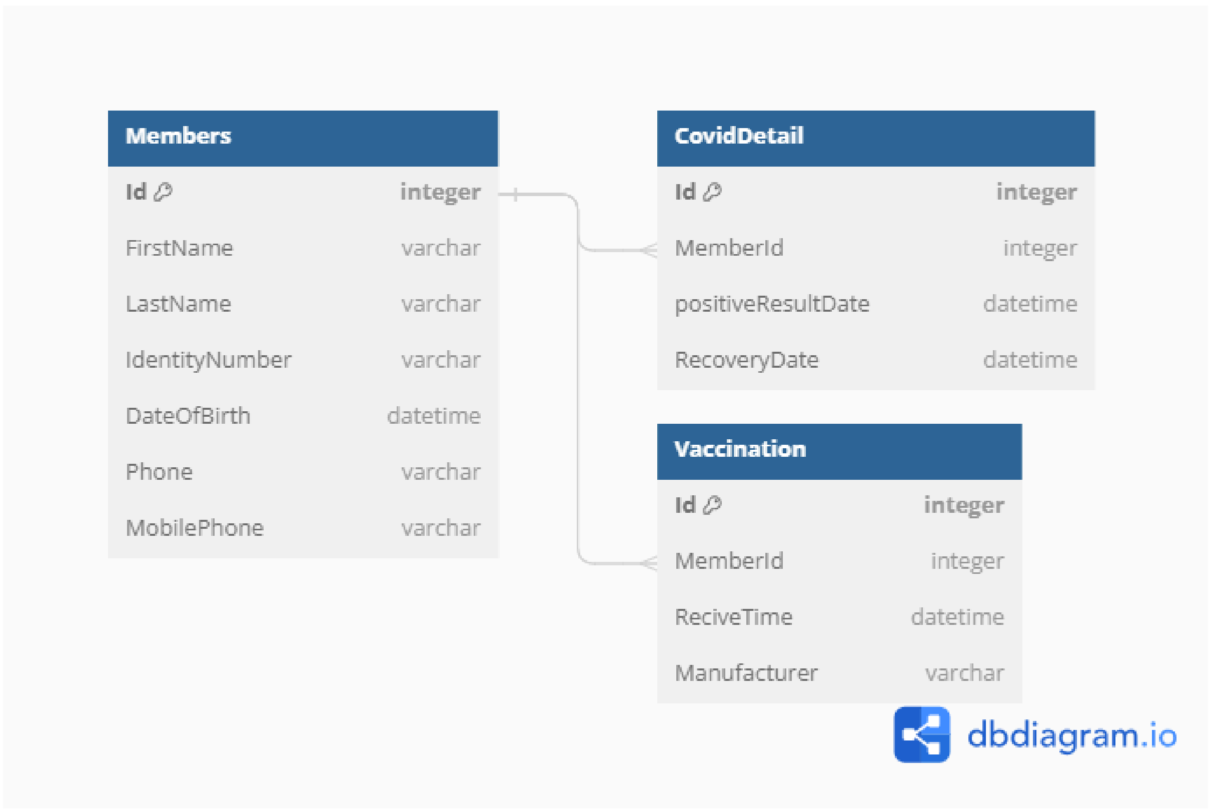
This documentation gives a high-level overview of how your system is structured, the responsibilities of each component, and the flow of data through the system.

Refer between different services with API





Database Schema



Members

Id	**integer**
FirstName	varchar
LastName	varchar
IdentityNumber	varchar
DateOfBirth	datetime
Phone	varchar
MobilePhone	varchar

CovidDetail

Id	**integer**
MemberId	integer
positiveResultDate	datetime
RecoveryDate	datetime

Vaccination

Id	**integer**
MemberId	integer
ReciveTime	datetime
Manufacturer	varchar