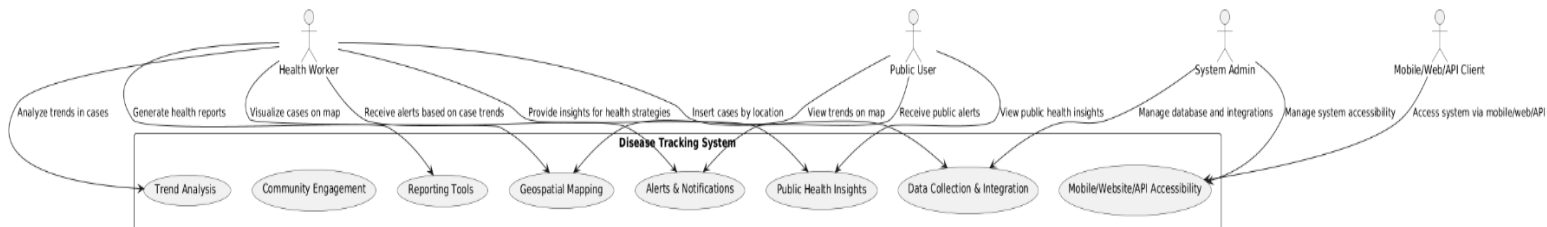2272049 JOSHUA JONATHAN, 2272040 DAUD JUNALDI PARASIAN PANJAITAN, 2272012 CHRISTIAN ADRIEL SUGIHARTO, 2272009 CHARLES WINATA

https://www.planttext.com/

Use Case

@startuml

actor "Health Worker" as HW

actor "Public User" as PU

actor "System Admin" as Admin

actor "Mobile/Web/API Client" as Client

rectangle "Disease Tracking System" {

  usecase "Data Collection & Integration" as DC

  usecase "Geospatial Mapping" as GM

  usecase "Trend Analysis" as TA

  usecase "Alerts & Notifications" as AN

  usecase "Reporting Tools" as RT

  usecase "Public Health Insights" as PHI

  usecase "Community Engagement" as CE

  usecase "Mobile/Website/API Accessibility" as MWAPI

}

HW --> DC : Insert cases by location

HW --> GM : Visualize cases on map

HW --> TA : Analyze trends in cases

HW --> AN : Receive alerts based on case trends

HW --> RT : Generate health reports

HW --> PHI : Provide insights for health strategies

PU --> GM : View trends on map

PU --> PHI : View public health insights
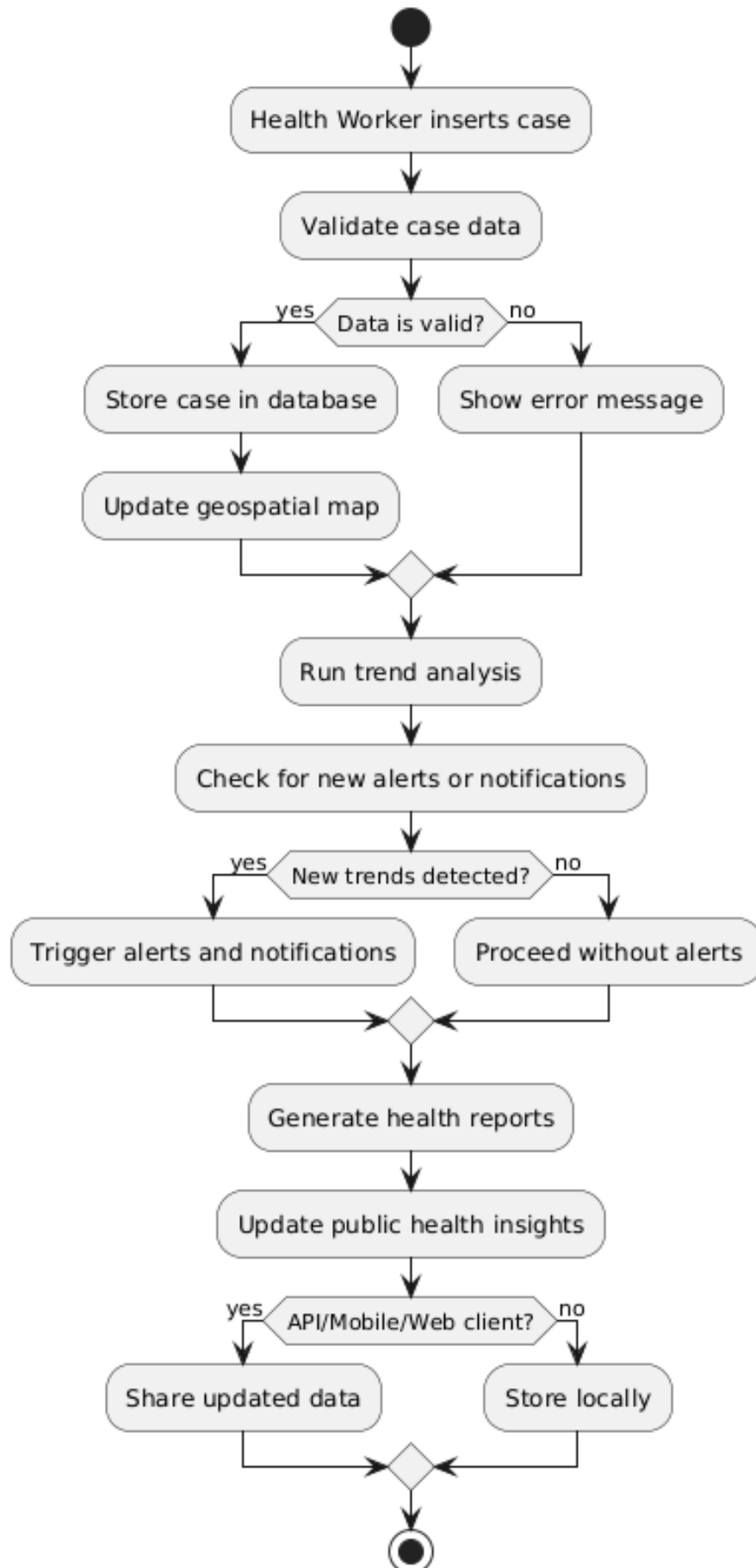
PU --> AN : Receive public alerts

Client --> MWAPI : Access system via mobile/web/API

Admin --> DC : Manage database and integrations

Admin --> MWAPI : Manage system accessibility

@enduml

2. flow/Activity diagram

```
                              ●
                              │
                              ▼
                  ┌─────────────────────────┐
                  │ Health Worker inserts case │
                  └─────────────────────────┘
                              │
                              ▼
                  ┌─────────────────────────┐
                  │    Validate case data    │
                  └─────────────────────────┘
                              │
              yes          ◇ Data is valid? ◇          no
        ┌───────────────────┘              └───────────────────┐
        ▼                                                       ▼
  ┌──────────────────────┐                        ┌──────────────────────┐
  │ Store case in database │                        │   Show error message   │
  └──────────────────────┘                        └──────────────────────┘
        │                                                       │
        ▼                                                       │
  ┌──────────────────────┐                                      │
  │  Update geospatial map │                                      │
  └──────────────────────┘                                      │
        │                                                       │
        └──────────────────────► ◇ ◄──────────────────────────┘
                                 │
                                 ▼
                     ┌──────────────────────┐
                     │   Run trend analysis   │
                     └──────────────────────┘
                                 │
                                 ▼
                 ┌────────────────────────────────────┐
                 │ Check for new alerts or notifications │
                 └────────────────────────────────────┘
                                 │
              yes          ◇ New trends detected? ◇          no
        ┌───────────────────┘                   └──────────────────┐
        ▼                                                           ▼
  ┌──────────────────────────┐                      ┌──────────────────────┐
  │ Trigger alerts and notifications │                  │  Proceed without alerts │
  └──────────────────────────┘                      └──────────────────────┘
        │                                                           │
        └────────────────────────► ◇ ◄────────────────────────────┘
                                   │
                                   ▼
                      ┌──────────────────────┐
                      │ Generate health reports │
                      └──────────────────────┘
                                   │
                                   ▼
                    ┌────────────────────────────┐
                    │ Update public health insights │
                    └────────────────────────────┘
                                   │
              yes          ◇ API/Mobile/Web client? ◇          no
        ┌───────────────────┘                     └──────────────────┐
        ▼                                                             ▼
  ┌──────────────────────┐                             ┌──────────────────────┐
  │  Share updated data   │                             │     Store locally      │
  └──────────────────────┘                             └──────────────────────┘
        │                                                             │
        └──────────────────────► ◇ ◄────────────────────────────────┘
                                 │
                                 ▼
                                 ◉
```

```
@startuml

start

:Health Worker inserts case;

:Validate case data;

if (Data is valid?) then (yes)

  :Store case in database;

  :Update geospatial map;

else (no)

  :Show error message;

endif


:Run trend analysis;

:Check for new alerts or notifications;


if (New trends detected?) then (yes)

  :Trigger alerts and notifications;

else (no)

  :Proceed without alerts;

endif


:Generate health reports;

:Update public health insights;


if (API/Mobile/Web client?) then (yes)

  :Share updated data;

else (no)

  :Store locally;

endif


stop
```
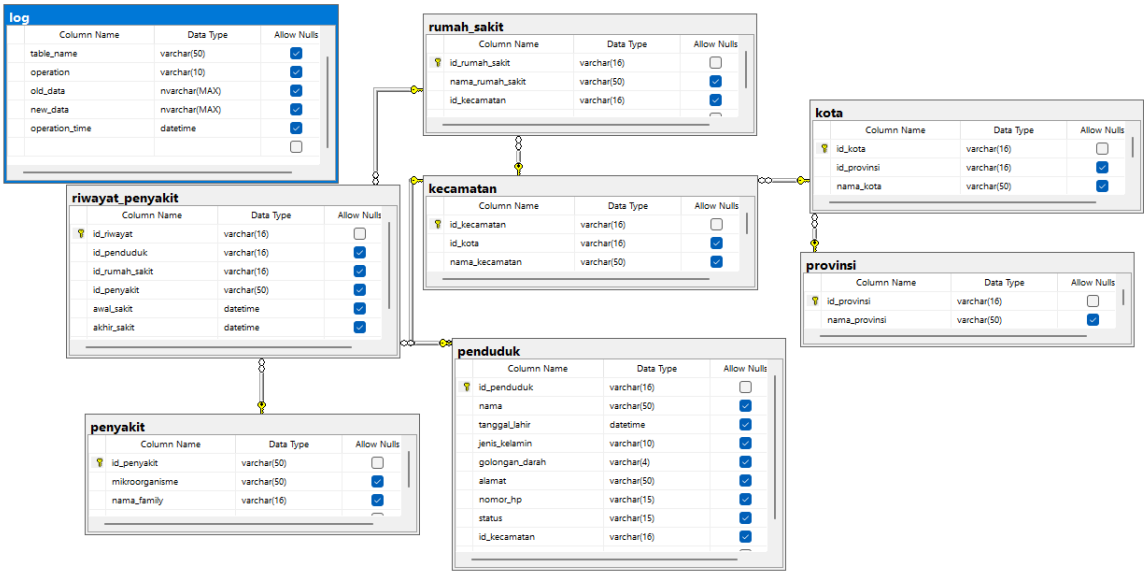
@enduml

ERD

UI/UX

Riwayat — □ ×

id_riwayat [|]

id_penduduk [▾]

id_rumah_sakit [▾]

id_penyakit [▾]

awal_sakit [01 November 2024 ▾]

akhir_sakit [01 November 2024 ▾] ☐ Jadikan NULL
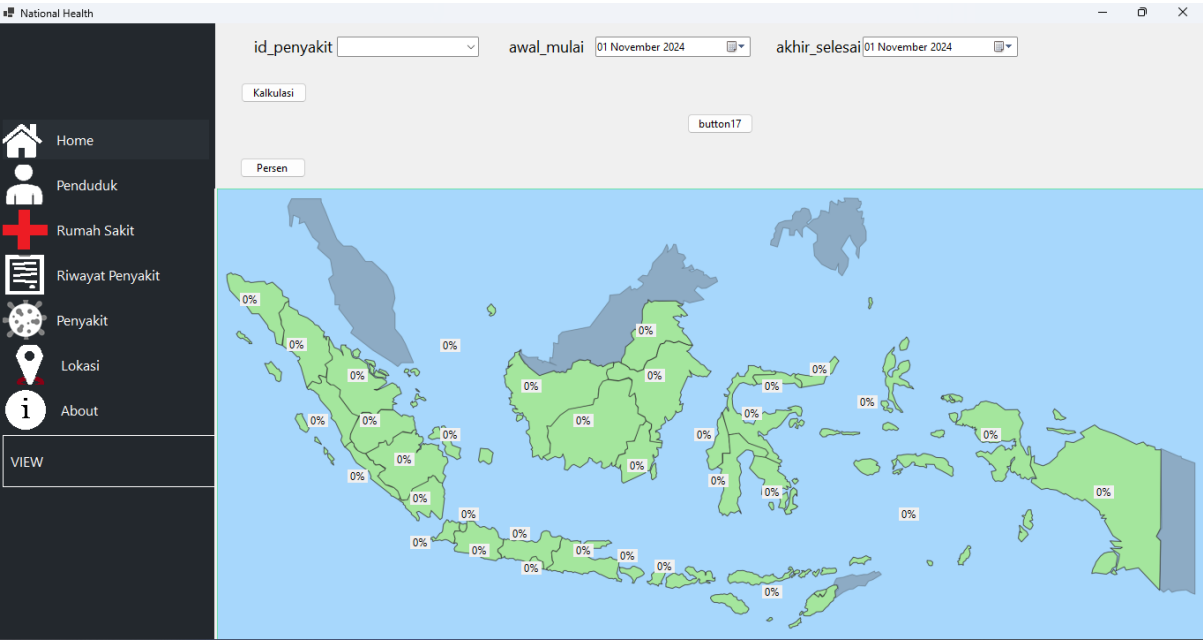
[Insert] [Update] [Delete]

Home

Penduduk

Rumah Sakit

Riwayat Penyakit

Penyakit

Lokasi

About

VIEW

id_riwayat	id_penduduk	id_rumah_sakit	id_penyakit	awal_sakit	akhir_sakit
1	1	1	AIDS	01/06/2024	16/06/2024
10	1	1	Ebola	01/06/2024	16/06/2024
11	10	2	COVID-19	01/06/2024	16/06/2024
12	10	2	COVID-19	01/06/2024	16/06/2024
13	10	2	COVID-19	01/06/2024	16/06/2024
14	10	2	COVID-19	01/06/2024	16/06/2024
15	10	2	COVID-19	01/06/2024	16/06/2024
16	123	5	Hepatitis B	01/06/2024	16/06/2024
17	123	5	Hepatitis B	01/06/2024	16/06/2024
18	123	5	Hepatitis B	01/06/2024	16/06/2024
19	123	5	Hepatitis B	01/06/2024	16/06/2024
2	1	1	AIDS	01/06/2024	16/06/2024
20	123	5	Hepatitis B	01/06/2024	16/06/2024
21	11	8	Ebola	01/06/2024	15/06/2024
23	9	6	Ebola	29/05/2024	16/06/2024
3	1	1	AIDS	01/06/2024	16/06/2024
31	20	2	COVID-19	18/07/2019	12/06/2014
32	5	4	Cholera	01/06/2024	
4	1	1	AIDS	01/06/2024	16/06/2024
5	1	1	AIDS	01/06/2024	16/06/2024
6	1	1	AIDS	01/06/2024	16/06/2024
7	1	1	AIDS	01/06/2024	16/06/2024
8	1	1	COVID-19	01/06/2024	16/06/2024
9	1	1	TBC	01/06/2024	16/06/2024