**VACCINE ADMINISTRATION TRACKER REPORT**

1. **INTRODUCTON**

The Government of Uganda seeks to track administration of COVID-19 vaccines among the citizens. This follows a target of having at least 90% of the population vaccinated for most of the activities to return to normal. The number of dozes which are received in the country are registered in the system. After which, they are distributed amongst the 5 approved health centers based on the need.

After receiving the vaccines, the health centers administer the vaccines to people in need and enter the details of each person in the system. These details include the NIN, name, and health center, date of administration, batch number and vaccine administered.

1. **DEVELOPMENT TEAM**

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1. **TOOLS AND SOFTWARES USED IN DEVELOPMENT**
2. **Apache Netbeans and Intellij**

These software served as the IDEs for development and debugging during the system development.

1. **Glassfish and Tomcat**

These software extended server capabilities to the development computers that were used to develop the system during the development process.

1. **Java Development Kit**

This tool enabled us compile the written project.

1. **SYSTEM MODULES**
2. **Vaccine**

* Performs registration of vaccines received.
* Responsible for showing the vaccine inventory status.
* Distributes the dozes to the health centers.
* Provides the necessary reports about the availability of vaccines.

1. **Administrator**

* Performs registration and authentication of users (two categories- administrators and patients.
* Sends email reminders to patients a day before their doze.
* Sends email when a new batch of vaccines arrive to the health facilities asking them to pick the vaccines from the headquarters.

1. **Health**

* Performs registration of health centers.
* Performs monthly needs assessment for the vaccines per health center.
* Updating of health center information.
* Provides the necessary reports.

1. **Vac\_administration**

* Performs the registration of those that take the vaccines.
* Calculates how far to hit the vaccination target.
* Responsible for certificate access and viewing.
* Provides necessary reports.

1. **Booking**

* Performs booking of vaccination time and place preference.
* Provides advisories on where to go for vaccination.
* Provides the necessary reports.

1. **DATABASE SCHEMAS AND STRUCTURE**

admin (

"id" INTEGER NOT NULL UNIQUE,

"name" TEXT NOT NULL,

"email" TEXT NOT NULL UNIQUE,

"password" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT)

)

booking (

"id" INTEGER NOT NULL UNIQUE,

"centre\_id" INTEGER NOT NULL,

"patient\_id" INTEGER NOT NULL,

"date" TEXT NOT NULL,

"time" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT),

FOREIGN KEY("centre\_id") REFERENCES "health\_centre"("id"),

FOREIGN KEY("patient\_id") REFERENCES "patient"("id")

)

centre\_dozes (

"id" INTEGER NOT NULL UNIQUE,

"doze\_id" INTEGER NOT NULL,

"centre\_id" INTEGER NOT NULL,

"quantity" INTEGER NOT NULL DEFAULT 0,

PRIMARY KEY("id" AUTOINCREMENT),

FOREIGN KEY("doze\_id") REFERENCES "dozes"("id"),

FOREIGN KEY("centre\_id") REFERENCES "health\_centre"("id")

)

certificate (

"id" INTEGER NOT NULL UNIQUE,

"vaccinated\_id" INTEGER NOT NULL,

"next\_date" TEXT,

PRIMARY KEY("id" AUTOINCREMENT),

FOREIGN KEY("vaccinated\_id") REFERENCES "vaccinated\_patient"("id")

)

dozes (

"id" INTEGER NOT NULL UNIQUE,

"vaccine\_id" INTEGER NOT NULL,

"quantity" INTEGER NOT NULL,

"batch\_number" INTEGER NOT NULL,

"arrival\_date" TEXT NOT NULL,

"distributed" INTEGER NOT NULL DEFAULT 0,

PRIMARY KEY("id" AUTOINCREMENT),

FOREIGN KEY("vaccine\_id") REFERENCES "dozes"("id")

)

email (

"id" INTEGER NOT NULL UNIQUE,

"email" TEXT NOT NULL,

"message" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT)

)

health\_centre (

"id" INTEGER NOT NULL UNIQUE,

"name" TEXT NOT NULL UNIQUE,

"center\_id" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT)

)

patient (

"id" INTEGER NOT NULL UNIQUE,

"name" TEXT NOT NULL,

"email" TEXT NOT NULL UNIQUE,

"password" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT)

)

vaccinated\_patient (

"id" INTEGER NOT NULL UNIQUE,

"patient\_name" TEXT NOT NULL,

"doze\_id" INTEGER NOT NULL,

"NIN" TEXT NOT NULL UNIQUE,

"date" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT),

FOREIGN KEY("doze\_id") REFERENCES "centre\_dozes"("id")

)

vaccine (

"id" INTEGER NOT NULL UNIQUE,

"name" TEXT NOT NULL UNIQUE,

"required\_shots" INTEGER NOT NULL DEFAULT 1,

"next\_doze\_time" INTEGER NOT NULL DEFAULT 0,

PRIMARY KEY("id" AUTOINCREMENT)

)

visited\_patients (

"id" INTEGER NOT NULL UNIQUE,

"centre\_id" INTEGER NOT NULL,

"number" INTEGER NOT NULL DEFAULT 0,

"date" TEXT NOT NULL,

PRIMARY KEY("id" AUTOINCREMENT),

FOREIGN KEY("centre\_id") REFERENCES "health\_centre"("id")

)