**E2E DOCUMENT**

**Project Name: Product Authenticator- (Case Study: Contraceptives Drugs).**

The main objective of this system is to build a system that, identify defective and counterfeit contraceptives in the pharmaceutical industry.

**Justification**

This system is really important because there have been a number of recalled products and goods from the market after being declared genuine by the government agencies, only to be found that they were not even tested due to the corrupt system. For example, in July 2011, on the Saturday Nation, the Kenya Efficiency Monitoring Unit reported that the Pharmacy and Poisons Board, a government organization which is mandated to ensure medicine that is sold to the public is of the right standard, registered drugs that were counterfeit and substandard, even after they failed safety test in the national quality control laboratory. Peanut butter, Medicines, Rice, Sugar, Flour, Contraceptives have also been recalled over the recent years.

The negative consequences are, it may lead to cancer and even unwanted pregnancies to those using counterfeit contraceptives.

**In Scope**

The in scope of the system is that it will use unique cryptographic identifier that is unique QR code or smart tags. These unique identifiers will be linked to a database in the server that will give out information of all genuine products and goods using the products information. This system will consist of a mobile application which generates QR codes and QR scanner. This system will also generate reports of all defective and counterfeit contraceptives drugs found in the market. The system will also contain a google map that gives the location of the counterfeit drugs found in the market.

**Out of Scope**

The out of scope is that the system should contain an artificial intelligent system that will be able to detect the counterfeit and defective goods and products in the market. Also, the system will not have a sensor mechanism which is implemented using IOT.

**System Requirements**

Product Authenticator system is designed to help organization such as KEBS, to be able to identify counterfeit and defective contraceptives drugs in the market in order for them to take actions before consumers get access of these counterfeit and defective goods. To achieve this, the system provides the platform for user to;

* Provide details for registration (email and password).
* Login using their registered email and password.
* For the user using the mobile application scans the products barcode using the QR scanner.
* The user sends notification to the admin and the admin generates report of all counterfeit and defective goods that are to be recalled.
* The admin is able to update details of the drugs and also generate QR codes of all products that have passed the certification process.