**Final Project – INFO 5100**

**Medical Test at Home – GET CHECKED**

**Team members:**

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**Problem Statement and Project Overview:**

* It is important to get tested whenever we have a symptom. Most of us are busy with work and we do not have the time to go to a hospital and wait in the boring halls for hours just for a mild symptom. But we should get tested on the off chance that a mild symptom hides a bigger health issue
* Fear of catching the recent covid-19 pandemic stops many people from going out to get tested for non-covid tests as the chances of getting infected increases
* We felt that there is a firm need to solve this problem using a digital solution so that we don’t waste much of our time making the hospital visits and also stay home safely during the pandemic
* Our purpose is to make people to be aware of the importance of testing and make sure everyone stays healthy and also save their time
* The application is a single place where one can order any kind of test kit either from online or go look for it in a retail store, and then send it for testing. If a customer does not know which test to take, you can have a quick talk with our doctors and they will guide the customer on which kind of test they should take, or should they get tested at all.
* This improves people’s lives its cheaper than a hospital visit and also generates income to the hospital as more people get tested every day.

**Proposed Solution**

* Rather than going to a hospital for a simple blood test or a covid-19 test, the application allows a customer to purchase the test kit
* Once you order the test kit, it will be delivered to you quicky by our home delivery service from the distribution unit
* Processing orders might take time if the product is unavailable as the distribution needs to order this from the manufacturer
* Customer can go to a retail store next to the house and buy the test kit themselves. They can finish the test and get the sample ready at home
* Once this is done, all a customer needs to do is to mail this and our administrators at the hospital will take care of the test
* Results will be shown on the application with the doctor’s comments

**Application Key Functionalities**

1. **System Administrator**

* Creates/modifies/deletes Networks
* Creates/modifies/deletes Enterprises
* Creates/modifies/deletes Warehouse Enterprise Administrator
* Creates/modifies/deletes Distribution Enterprise Administrator
* Creates/modifies/deletes Hospital Enterprise Administrator
* Creates/modifies/deletes Retail Enterprise Administrator
* Creates/modifies/deletes FDA Enterprise Administrator

1. **Warehouse Enterprise Administrator**

* Creates/modifies/deletes Warehouses
* Creates/modifies/deletes Manufacturing Warehouse Administrator
* Creates/modifies/deletes Shipping Delivery Man

1. **Distribution Enterprise Administrator**

* Creates/modifies/deletes Distribution Units
* Creates/modifies/deletes Managers
* Creates/modifies/deletes Home Delivery Man
* Creates/modifies/deletes Retail Delivery Man

1. **Hospital Enterprise Administrator**

* Creates/modifies/deletes Hospitals
* Creates/modifies/deletes Laboratory Admins
* Creates/modifies/deletes Laboratory Technicians
* Creates/modifies/deletes Consulting Doctors
* Creates/modifies/deletes Approving Doctor

1. **Retail Enterprise Administrator**

* Creates/modifies/deletes retail stores
* Creates/modifies/deletes Store Admins

1. **FDA Enterprise Administrator**

* Creates/modifies/deletes FDA divisions
* Creates/modifies/deletes FDA administrators

1. **Manufacturing Warehouse Administrator**

* Creates Test kits
* Gets products Approved from the FDA
* Approves/denies Shipping orders from Distributors
* Assigns Shipping orders to shipping men

1. **Warehouse Shipping man**

* Takes orders from the Manufacturer
* Ships these orders to the respective Distribution units

1. **Distribution Unit Manager**

* Place shipping orders for the test kits
* Approves/Denies orders from customers
* Approves/Denies orders from Retail Store Administrators
* Assigns customer orders to Home delivery men
* Assigns retail orders to Retail Delivery men

1. **Home Delivery Man**

* Takes orders from the Distribution unit Manager
* Delivers test kits to the respective customer

1. **Retail Delivery Admin**

* Takes orders from the Distribution unit Manager
* Delivers test kits to the respective Retail Store

1. **Laboratory Administrator**

* Takes samples from the customer
* Examines them and approves/ denies testing based on the samples
* Assigns an appropriate technician to process/test the sample

1. **Laboratory Technician**

* Takes samples approved by the laboratory admin
* Processes/tests the samples and writes remarks on it
* Sends it to a doctor for approval

1. **Approving Doctor**

* Examines the sample results given by the laboratory technician
* Writes remarks and sends the results back

1. **Store Administrator**

* Place retail orders from distribution

1. **Consulting Doctor**

* Examines customers symptoms
* Suggests appropriate tests

1. **FDA Administrator**

* Examines test kits and their type
* Approves/denies the product

1. **Customer**

* Signs up for himself
* Can buy a test kit online from our distribution unit
* Can find a retail outlet and go there to buy the test kit
* Can view his/her orders in their portal
* Can send his/her samples to a hospital
* Can consult a doctor, ask him for a test suggestion if he/she does not know which test to take for their symptoms
* Can view their results in the portal

**Ecosystem Architecture:**

Object Model Diagram:

Diagram, schematic

Description automatically generated

Class Diagram

Diagram

Description automatically generated

Sequence Diagram

Chart

Description automatically generated