

Universidad de las Fuerzas Armadas ESPE

Object-oriented programming workshop

Tecno Cody Team

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NRC: 3248

Health Cody + Project

Problem:

Given the high global demand for **molecular** tests for the **diagnosis** of coronavirus, local **laboratories** are also beginning to suffer shortages of their reagent supplies. Therefore, software is required at no cost, easy to access, and with a minimum margin of error, which **allows** the general population from the comfort of their home to obtain a prediction on suspected COVID-19 disease and subsequent appointment reservation for PCR tests in your **preferred mobile** laboratory according to its result, thus providing a streamlined, quality service with adequate biosafety protocols, including a results storage system and inventories.

Overview:

Free software for use in COVID-19 **laboratories mobiles**, which is responsible for storing the availability of quick tests and PCR, as well as patient information along with their results and upcoming appointments. Our system provides a prediction of contagion of COVID - 19 according to a brief survey conducted during the patient's registry, this will help the medical team to **implement** a common or special safety protocol (isolation and follow-up of the patient during his **visit** to the laboratory) in order to prevent the spread of the virus. The outcome of the molecular tests shall be stored and subsequently **delivered** to the patient together with recommendations for his or her **health**.

Background:

Due to the health emergency present throughout the world, a series of problems have been generated at the national and international level, economic such as the fall in the stock market, where companies stop producing and people stop consuming, social as the **shortage** of drugs to combat covid-19 and politicians such as the trade war for petroleum.

In addition, there are **currently** 65.7 million cases registered worldwide, with a total of 1.51 million deaths. The global outbreak has made many companies and institutions, as a **precaution**, accelerate the **implementation** of alternative work models.

The WHO (World Health Organization) when collaborating with world and governmental experts, suggested a mandatory distancing and isolation at the global level, to eradicate the spread of the Sars-Cov-2 virus that causes COVID-19.

In the measures that have been taken to stop contagion, governments from different parts of the world have made the decision to isolate their citizens in a mandatory way, starting from quarantine, greatly damaging the country's economy, but safeguarding the lives of its citizens.

In Latin American countries, the consequences are serious not only because of their economic impact, but also because of the fragility of Latin American democracies and inequalities, which has prevented the design of a joint strategy.

The Covid-19 crisis and its enormous impact on international relations between countries around the world have interfered in their economic systems, producing less international trade in countries that, before the health emergency, depended on it to cope with their productive activities. And that they have seen the need to free up labor, harming families that depended on the activities.

Analyst Comparison

The characteristics to be defined in this application are divided into two important parts, which are at the user level and at the administrator level. Upon entering the application, the user will have to fill out a semi-mandatory survey which will have questions related to Covid-19, at the end of this survey an estimate of their health status will be shown, therefore the patient can always schedule an appointment when you are registered in the application system.

For the person in charge of managing the application, they must have an administrator username and password to be able to enter and access additional functions. In the functions already named, the administrator will be able to see the inventory, see the itinerary of tests to be carried out and see the results of the patients.