**Laboratory management System**

**Objective highlights**

* Designa comprehensive lab management system that answers to all round needs of a laboratory.
* Phase development, to first develop a component that seamlessly connects to different lab equipment.
* The developed system should adhere to an available standard like HL7, DICOM, ASTM and others and its should have interfaces that can easily convert messages from one standard to the other.
* The system should also support the different communication mechanisms I.e Serial connections, network connections, usb among others that are used with lab machines.

**Expected modules**

* **Machines Manager -** handles all requirements of registering, configuring and communication with lab machines
* **Patient Manager**– manages the different clients that receive services with in the lab, they could be internal/referrals.
* **Financial Manager –** manages all financials from billing to reporting.
* **Inventory manager** - this module will be in-charge of tracking the different items used in processing the tests, the reagents used in the lab machines and any other stock-able items that need to be traced.
* **Sample tracker manager** - In cases where samples move in and out of a specific laboratory this module will to track such details.
* **Staff Manager** – a mini Module that manages personnel woking in the lab and their responsibilities in regard to processing the tests
* **Lab Test Manager** – this module will be responsible to handle all configurations that go into a lab test.
* **Sample Manager - helps labs track and manage samples from the point of collection through analysis and reporting**
* **Quality Control Manager-**helps in monitoring instrument performance, tracking calibration and maintenance schedules, and flagging out-of-spec results
* **Reporting manager- generate timely reports that help describe different processes with clear and self explanatory visuals**

**Methodologies**

* modular approach should be prioritised where most of the modules can be thought of as independent entities
* teams should deliver in forms of assignments where specific topics are assigned to individuals and information shared during designated meetings
* weekly meetings of about 1 to 2 hours should be observed to enable sharing.
* Identification of professionals in different walks of the lab and medical fraternity at large should be engaged and involved during the development lifecycle