🧪 Smart Lab

Clinical Laboratory Management Software

Developed by Ekoders Software

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    9.1)   Laboratory Display System (Separate single screen for lab display with report status)

    9.2)   CBC Analyser Integration (LIS) (3 Part, 5 Part, 6 Part)

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1. General

1.1) Login System

Smart Lab is using highly encrypted algorithm to secure the application and data. New users can be created with password in User Master.

1.2) Single screen Report Processing

Smart Lab has one main screen to perform operations. Patient details, Doctor details, Referral Lab details, Investigation and Result details, Payment details all are will be covered in single screen for easier operations.

1.3)   User wise access Settings

Menu -> Master -> Control Panel -> Custom User Control

You can configure the user settings to provide access permission of each process.
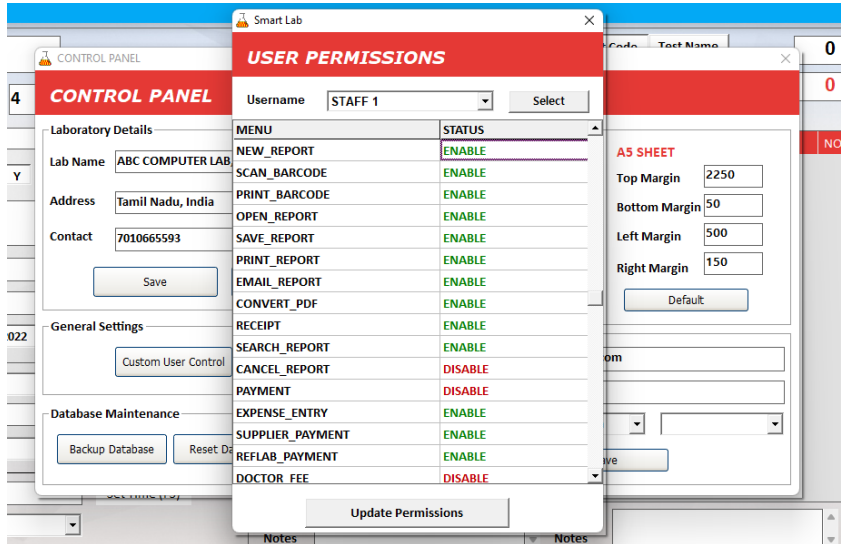
1.4)   In-Built investigations and tests along with details

Menu -> Master -> Test Master

There are more than 700 tests that are preinstalled in Smart Lab. Also you can edit and add new tests/investigations as you want.
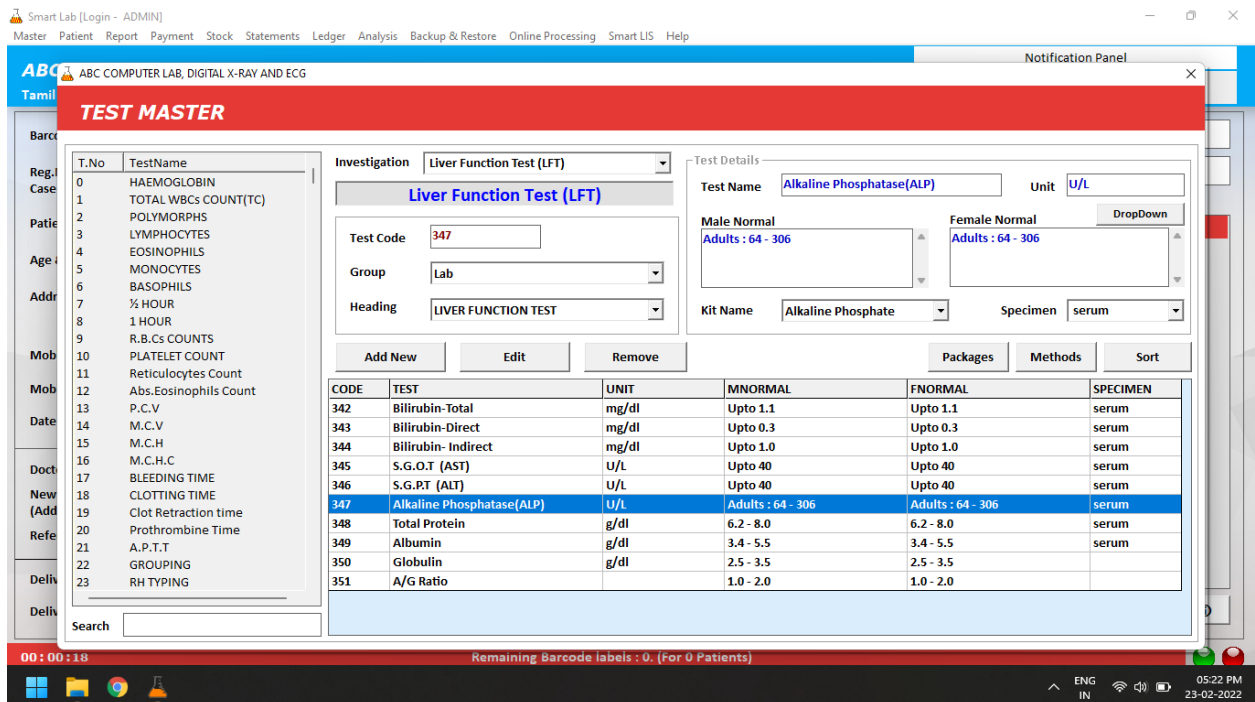
1.5) Automatic Calculation for Lipid Profile, LFT, Hba1c, Bilirubin

Automated the results that are arrived by calculations of depended parameters for the investigations such as Lipid Profile, Liver Function Tests, HBa1c, and Bilirubin. This will helps you to avoid manual calculation errors and speed up the reporting process.
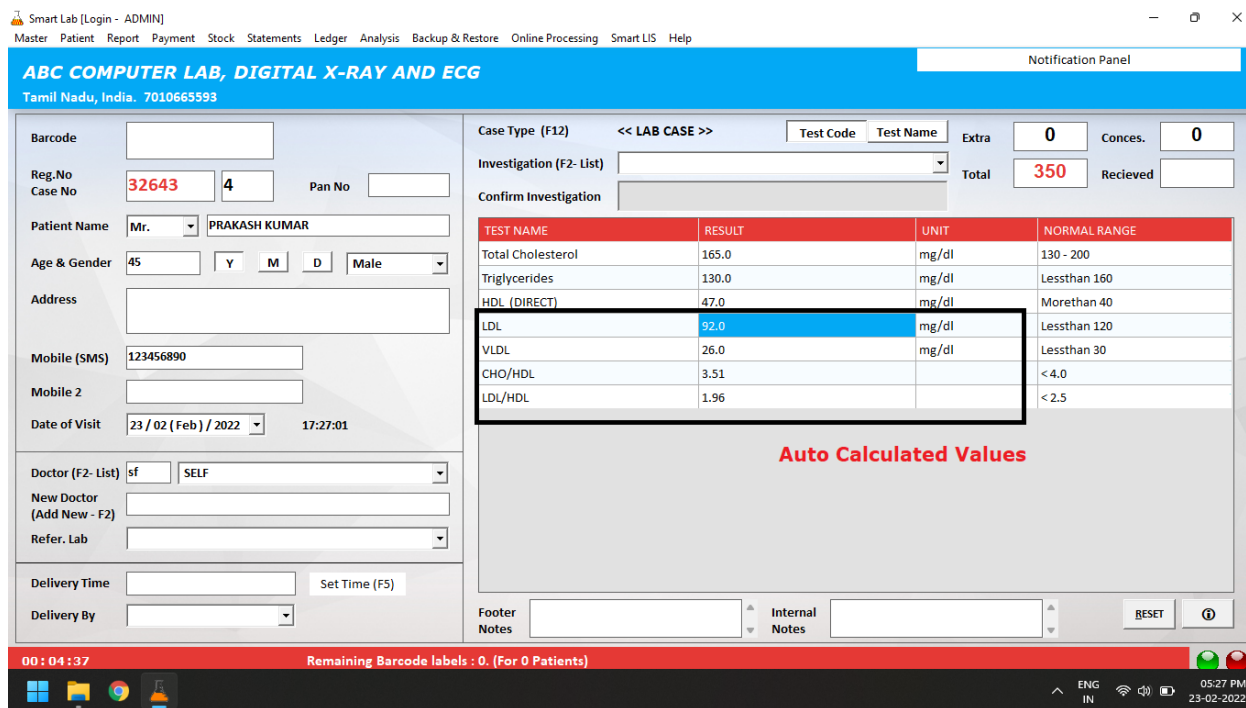
1.6) Test result selection with simple dropdown

For the tests that are having fixed result values, you can simply select the result by the dropdown feature as shown below. You can also customize the drop down value as you want.

TEST NAME	RESULT	UNIT	NORMAL RANGE
Total Cholesterol	165.0	mg/dl	130 - 200
Triglycerides	130.0	mg/dl	Lessthan 160
HDL (DIRECT)	47.0	mg/dl	Morethan 40
LDL	92.0	mg/dl	Lessthan 120
VLDL	26.0	mg/dl	Lessthan 30
CHO/HDL	3.51		< 4.0
LDL/HDL	1.96		< 2.5
GROUPING			
RH TYPING			
S.TYPHI "O" ANTIGEN	Negative (1: 20 dil)		
S.TYPHI "H" ANTIGEN			
S.PARA TYPHI "AH" ANTIGEN	Negative (1: 20 dil)		
S.PARA TYPHI "BH" ANTIGEN	Positive (1: 40 dil)		
	Positive (1: 80 dil)		
	Positive (1:160 dil)		
	Positive (1:320 dil)		

1.7)   Investigation/Test addition (Unlimited), edit, remove

Menu -> Master -> Investigation Master/Test Master

You can add, edit and remove the investigation as well as tests in simple steps.
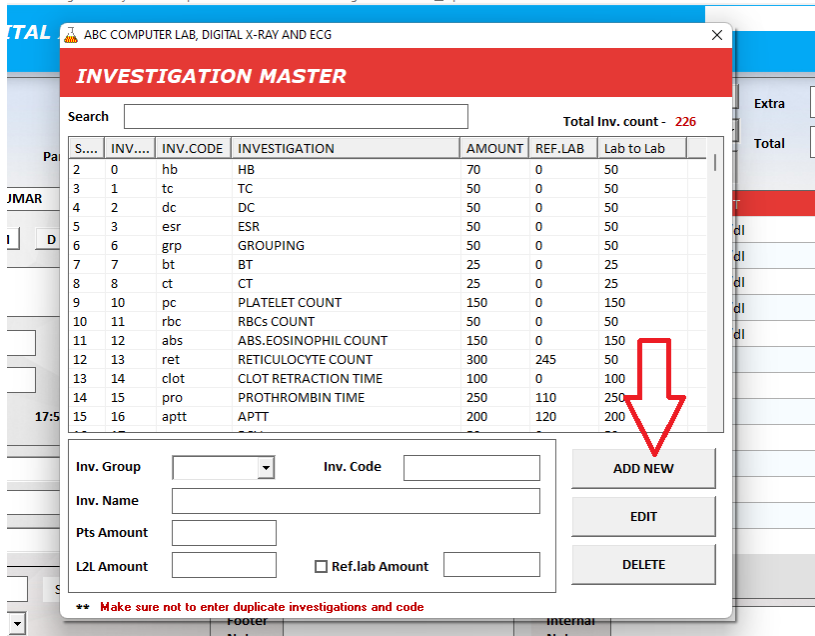
1.8)   Investigation package creation

Menu -> Master -> Test Master -> Package

You can create your own packages with custom investigations. e.g. Master Health Check up
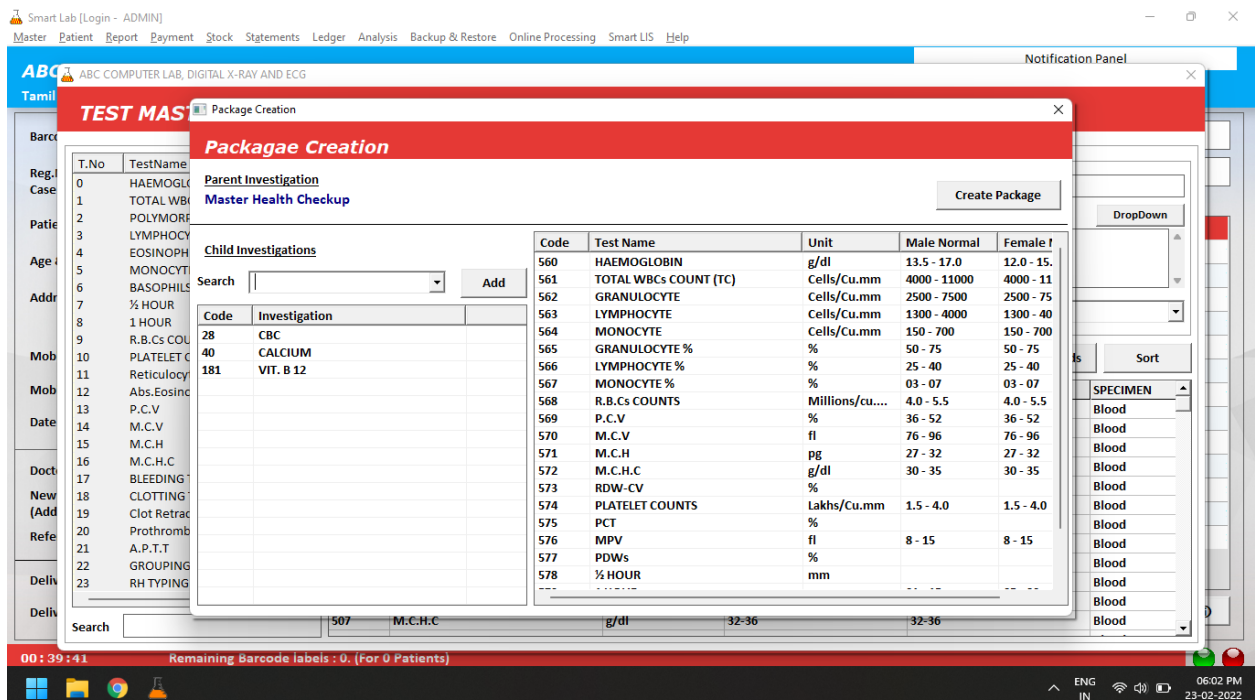
1.9) Barcode generation and label printing

Barcode will be automatically generated at the time of new registration entry. You can print the barcode labels and stick it on test tubes for the identification. This barcode can be printed in the test report and by scanning it you can view the patient details in the application.

1.10) Cash Receipt printing

Cash Receipt can be generated by

Menu -> Report -> Cash Receipt.

1.11) Investigation wise detailed bill printing

Investigation wise detailed bill can be generated by

Menu -> Report -> Investigation wise Receipt.

Both print designs can be modified as per the requirement.

1.12) <u>House Visit Appointments</u>

House visit appointments will be scrolled in bottom of the main screen as a reminder and also you can view as report.
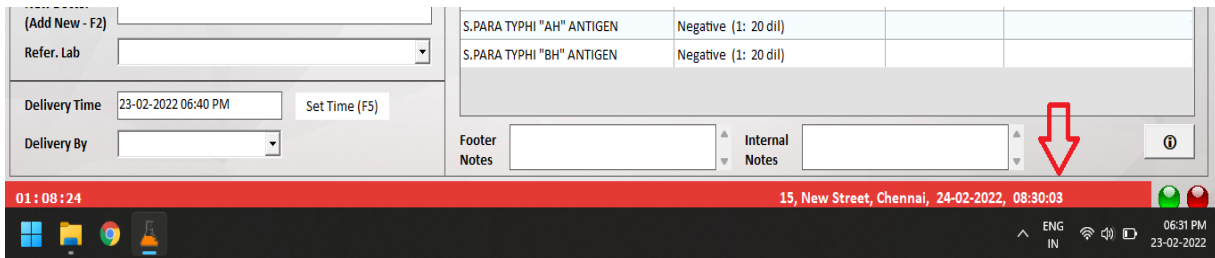
1.13) <u>Lab/House visit case entries</u>

You can differentiate the registration by choosing lab case or house visit sample collection. This will help you to filter the reports that are needed to be delivered at home

1.14) <u>Overall Statistics Analysis</u>

This will shows you some statistical details about the attended cases, income details, patients and doctor wise collection.

a) Day wise collection Ranking
b) Doctor wise collection Ranking
c) Line Graph view of No of Cases and Collection Amount
d) Cases and Collection amount average
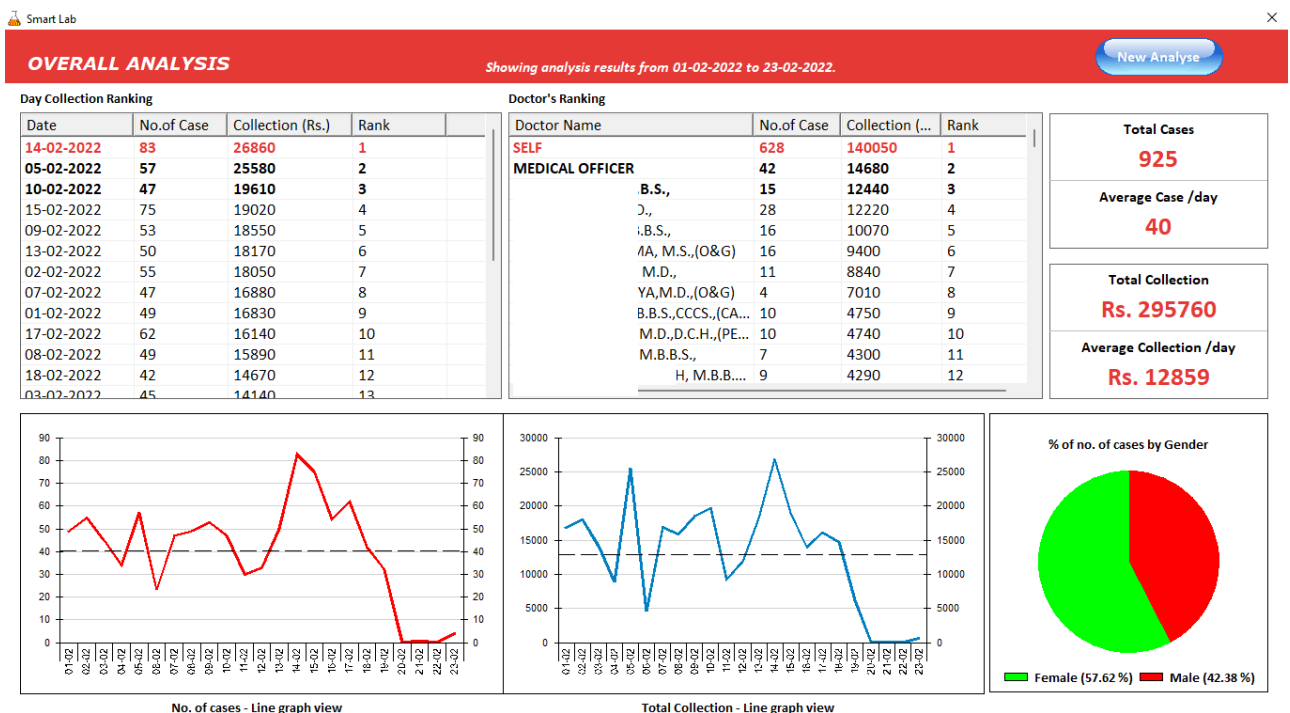
1.15)   Contact phone Book

Menu -> Master -> Contact Master

You can add the contact details of various groups of people such as Patients, Supplier, Ref.Lab, Doctors and so on. At the time of report sending via email, you can choose the contact from phone book.
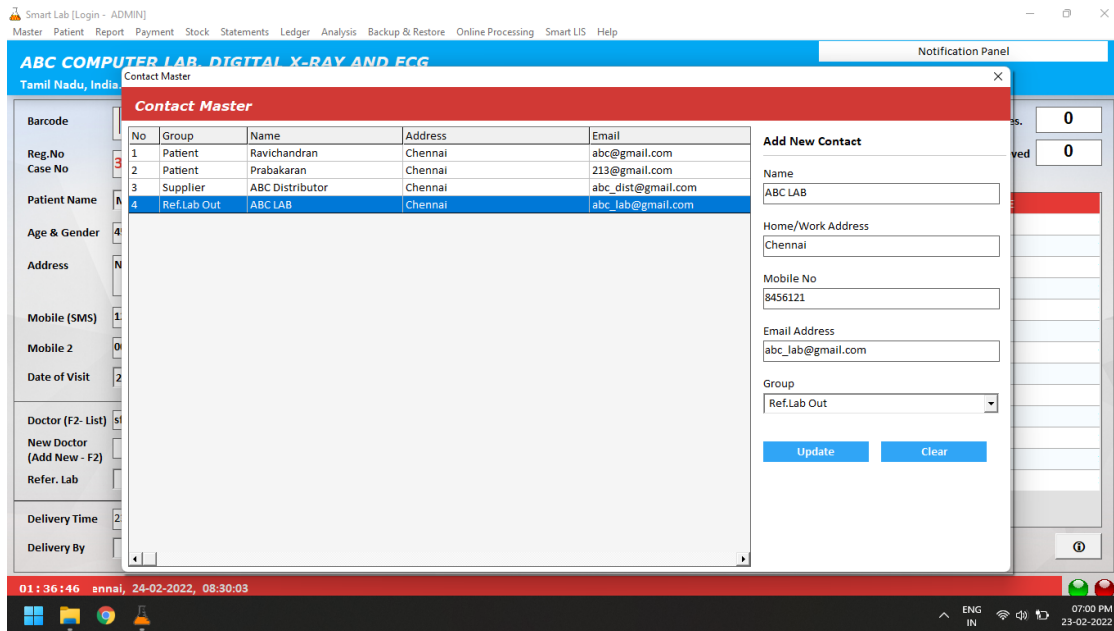
1.16)   Staff details entry

Menu -> Master -> Staff Master

You can add the working staff details in Staff Master. Staff name need to be selected in some of the report/payment processing areas. e.g. To know who collected the due amount from the patient.
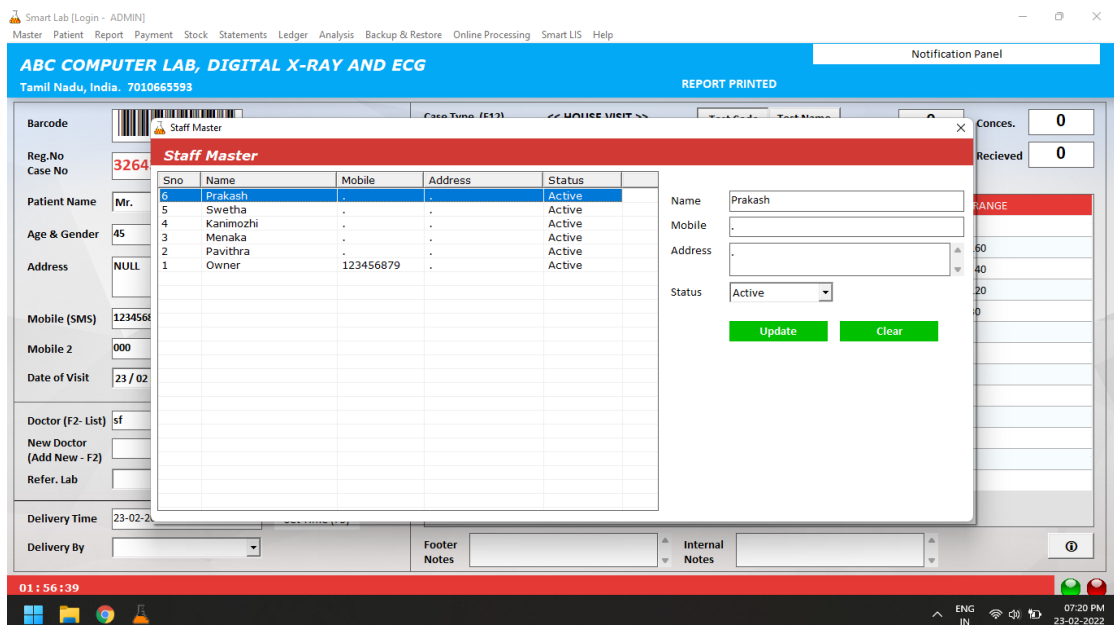
1.17) **Yearly Accounts Closing, Data Reset & Switch Database**

Menu -> Master -> Control Panel -> Reset Database

You can reset your database whenever you want. This leads to reset the registration number to start from 1. Usually this process will be done on calendar year end or financial year end.

Once the database reset process done, the previous year database will be available to view the old data. This can be done by switching to old database by using Switch Data tool as shown in below.

1.18)   Referring Lab Reports Tracking (Out lab specimen and report)

Menu -> Patient -> Referring Lab Reports

If any test that need to be performed in out lab (referring lab), then you can track the status of sample/report as shown below.

Each Sample can be send to any referring lab (This can be added in Referring Lab Master)

Then you can change the status of the report once it is received/printed/despatched.

You can view the current status of report as shown in below. This will show the timeline of each status update and the user who updated it.

1.19) Multi-Processing Setup (Sample Collection, Lab, Reporting, Despatching)

You can use Smart Lab in various stages as shown in below.
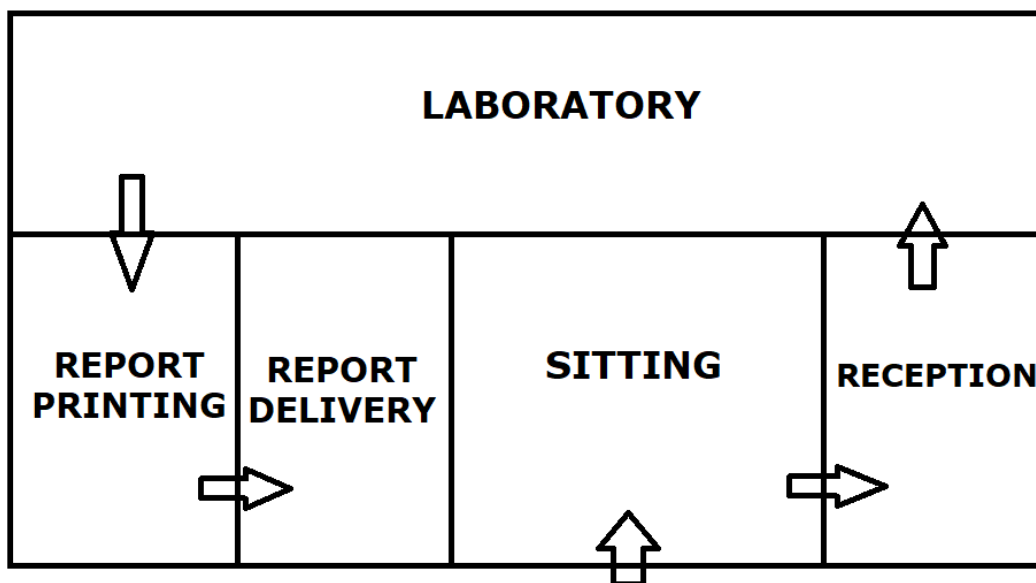
1) Registration Entry in Reception
2) LDS in Laboratory
3) Report Printing
4) Payment Collection and Report delivery

1.20) Smart Notifications

You will receive a notification on several things such as report delivery, LIS report receiving, payment due alert, house visit appointment alert and so on.

2. Patient

2.1) Patient Database

Here you can view all the details about the patient. You can also filter patient by the case type and date value.

Menu -> Patient -> Patient Database (Shortcut: Ctrl + F1)

2.2) Regular Patient

You can add your regular patient's data in Client Master. Also you can provide PAN cards to them. When their visit, you can select patient by PAN No or Mobile No. This will help you to track the past history of patient.

2.3) Payment Due Details

Menu -> Patient -> Due Details (Shortcut: Ctrl + G)

Here you can view the payment details of patient at any period of date. You able to add extra amount or concession amount with proper reason. You can despatch report in this screen to know whether the report is delivered to the patient or not.

2.4) Patient test report history analysis (Intelligent search engine)

Menu -> Patient -> Patient History (Shortcut: F8)

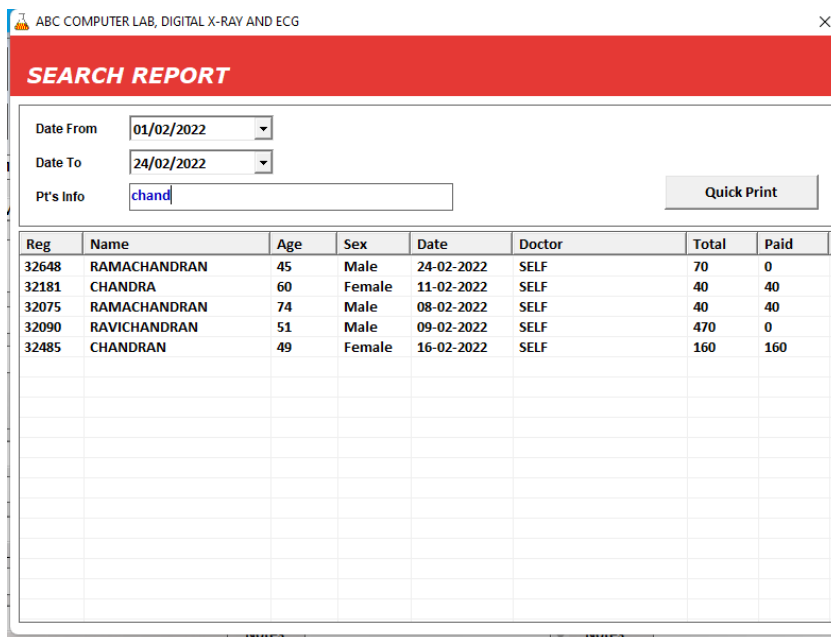There are two types in this history analysis.

1. If you know the mobile number of the patient then it is very simple to get the past report history of that particular patient.

2. If you don't know the mobile number then, Smart Lab's intelligent search engine will analyse and search with the patient name, age, address and similar details.

2.5) **Search Patient based on name, mobile number, address**

Menu -> Report -> Search Report (Shortcut: Ctrl + F)

You can search the patient by their name/mobile number/address on a selected date range.

Reg	Name	Age	Sex	Date	Doctor	Total	Paid
32648	RAMACHANDRAN	45	Male	24-02-2022	SELF	70	0
32181	CHANDRA	60	Female	11-02-2022	SELF	40	40
32075	RAMACHANDRAN	74	Male	08-02-2022	SELF	40	40
32090	RAVICHANDRAN	51	Male	09-02-2022	SELF	470	0
32485	CHANDRAN	49	Female	16-02-2022	SELF	160	160

3. Doctor

3.1) Doctor Master

Menu -> Master -> Doctor Master

You can add doctor details in master, so that you can select doctor from the list at the time of registration.

3.2) Quick Add doctor on the spot of registration

You can enter new doctor at the time of registration without adding it in master. Moreover you can add it in master by pressing F2.

3.3) Doctor Commission details

In Doctor Master, the commission percentage should be updated initially. Once it is configured, the commission amount will be calculated automatically for each registration referred by the respective doctor.

4. Reporting

4.1) Fully Customisable Report Format

Smart Lab Reporting is powered by Crystal Reports. All the reports/statements can be customized as you want.
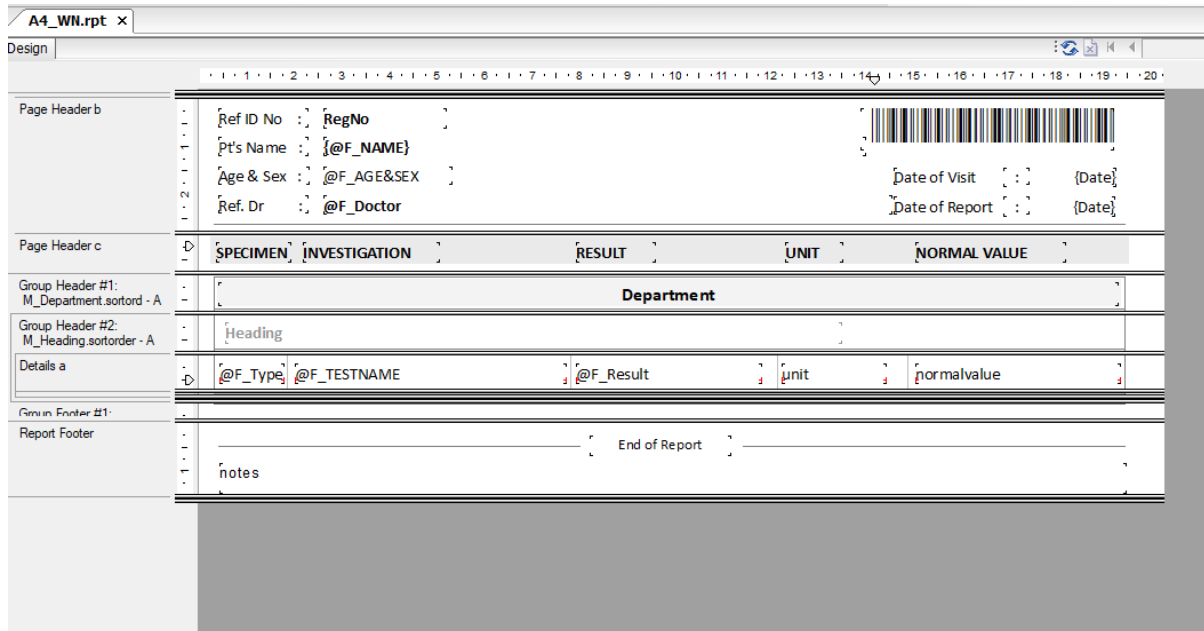
4.2) Report Header/Footer can be included

If you are not using pre-printed report pad then you can set your report pad header and footer in print design.

4.3) Dual report paper A4/A5 (or any paper size)

You able to print report on dual size. If there are fewer tests in a row means you can go with A5 sheet.

4.4) **Test wise Reporting**

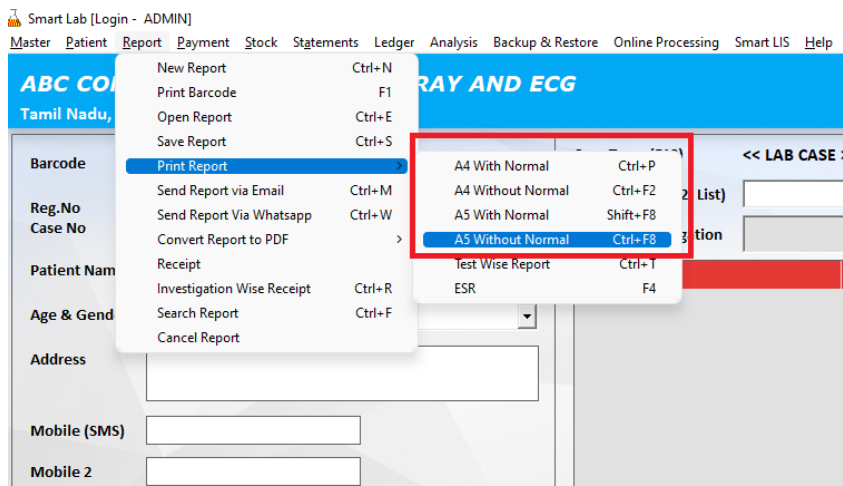**Menu -> Report -> Print Report -> Test Wise Report (Shortcut: Ctrl + T)**

You can print report by test wise. If you want to split the report into multiples you can use test wise reporting feature.

4.5) **Report With Normal Value/ Without Normal Value Formats**

Menu -> Report -> Print Report -> (4 Options)

For the tests, those not having normal values (e.g. Blood Grouping) can be reported without normal value column.

4.6) Send Report via Email

Menu -> Report -> Send Report via Email (Shortcut: Ctrl + M)

You can send the test reports to patients or referral lab via email. You can also send multiple reports in a single mail. Attaching external file is possible.
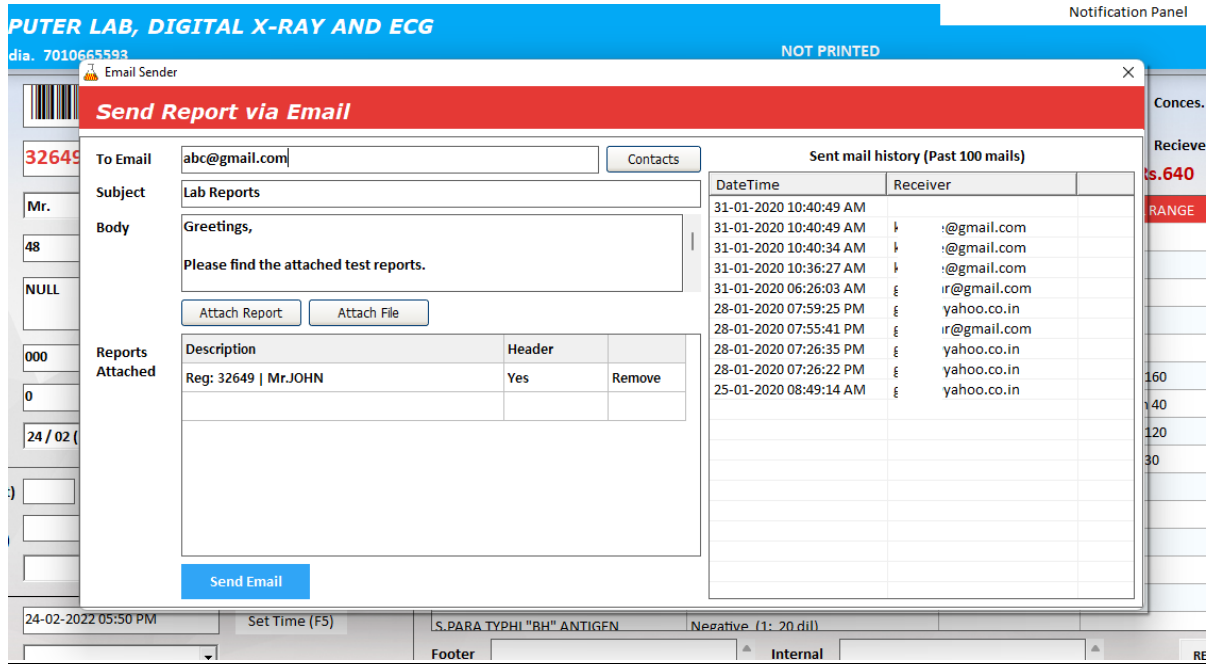
4.7) Send Report via Whatsapp

Menu -> Report -> Send Report via Whatsapp (Shortcut: Ctrl + W)

Report will be uploaded in secure cloud database in encrypted format. This cloud link can be shared in Whatsapp or any other social app. When user clicks the link, it will open as PDF file.
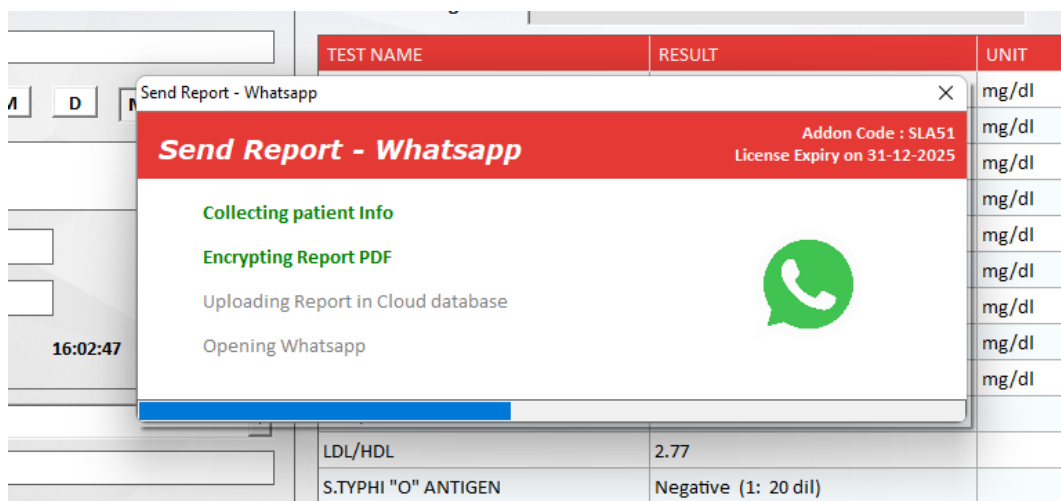
4.8) Convert Report to PDF

Menu -> Report -> Convert Report to PDF -> With/Without Header
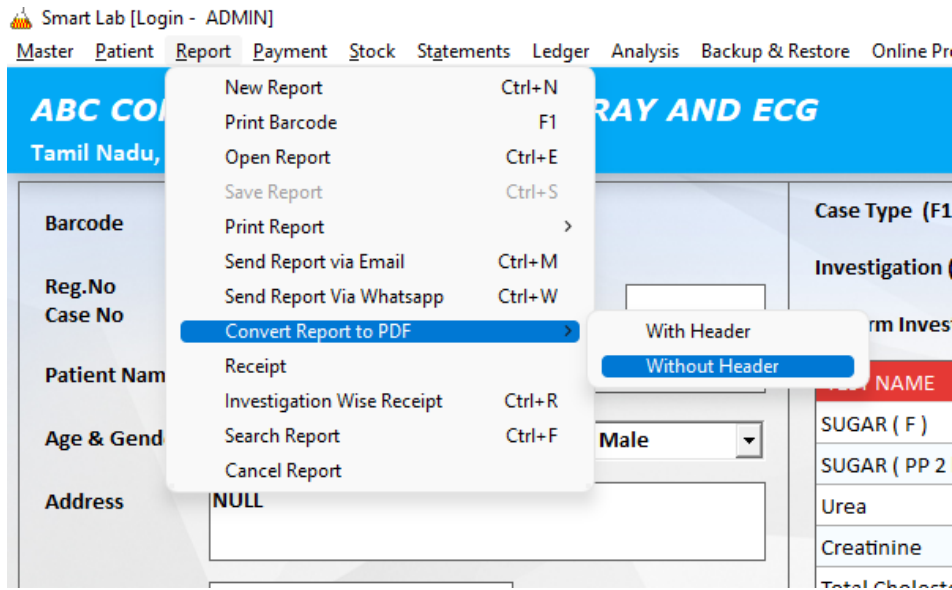
4.9) Investigation/Test Methods in report print

1) To create test methods
Menu -> Master -> Test Method Master

2) To map the method against tests
Menu -> Master -> Test Master -> Methods

You can create and map the testing methodology for each test in master. Those details can be mentioned against the tests in the report. Multiple methods can be configured for single test.

4.10) **Auto sorting tests based on its department order**

At the time of new patient entry, you can select the tests in any order. But in the report print, tests will be automatically ordered based on the department.

4.11) **Result High/Low flags in Report**

In test report, tests can be pointed out those are abnormal in values which may below or above reference range.
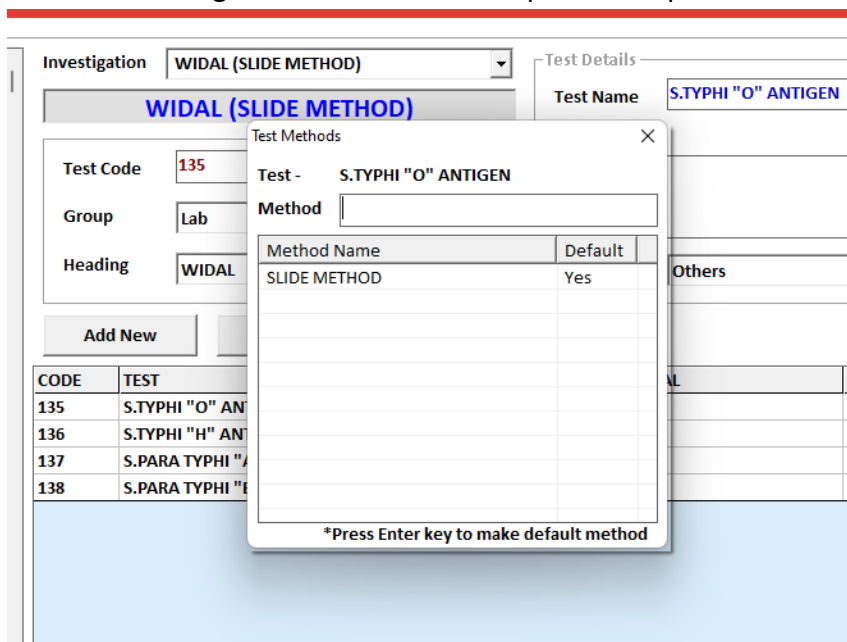
4.12) **Footer notes**

You can enter footer notes that will print at the end of the report. (e.g. *Rechecked)

4.13) **Separate report designs for CBC, Thyroid, RAF, HBA1C and more**

It is possible to print separate report for any kind of investigations. You can also mention the analyser name and details in report.

4.14) **Culture Reporting with Sensitive/Resistant including Growth Values**

Smart Lab has special reporting feature for any kind of culture investigation.

9. **Add-ons**

9.1) **Laboratory Display System (LDS)**

Laboratory Display System or simply known as LDS is a single screen program that shows all the patient details in a single screen with their current status. This screen can be used in the laboratory (test processing area) that used to make sure all the tests are performed for a registration and it is ready on time.

Here are some of the uses/advantages of LDS

a) To know the status of the report such as Pending, Completed, Despatched. Each status will have different colour codes to identify it easier.
b) To know what all the investigations are that need to be performed in referring lab.
c) Upcoming report delivery details will be listed on a side, so that we can done it before the dead line.
d) You will receive various notifications on the right bottom of the screen. e.g. New patient entry.
e) On clicking on the info box, you able to see the entire information about the patient including payments.
f) This screen will be automatically refreshed so that each report status will be on screen at real time.
g) You can also feed the result and print the report directly from this screen.
h) You can view the patient history before entering the results.

9.2) CBC Analyser Integration (LIS) (3 Part, 5 Part, 6 Part)

You can connect your CBC machine with Smart Lab application to transfer the patient results. So that you able to edit the patient details and customize the report format as you want from the application. This will help to avoid the human errors while manually typing those CBC parameters.

Here are some of the uses/advantages

a) Transfer test results on single click to the respective registration.
b) Can modify test results/normal values in case of need.
c) Get instant notification on receiving the report from analyser.
d) Can share the report via mail/Whatsapp whatever the need.
e) Fully customizable CBC print design.
f) Can include any extra parameters such as ESR, Grouping etc.
g) Can use the unit, normal value from the master settings, instead of receiving from analyser.
h) You can view the data logs of past received reports from analyser
i) In case of failure in receiving the data, you can manually receive again from Data log screen.
j) Supported : Network (LAN), Serial RS232 communications
k) Supported : ASTM protocol (LIS2)
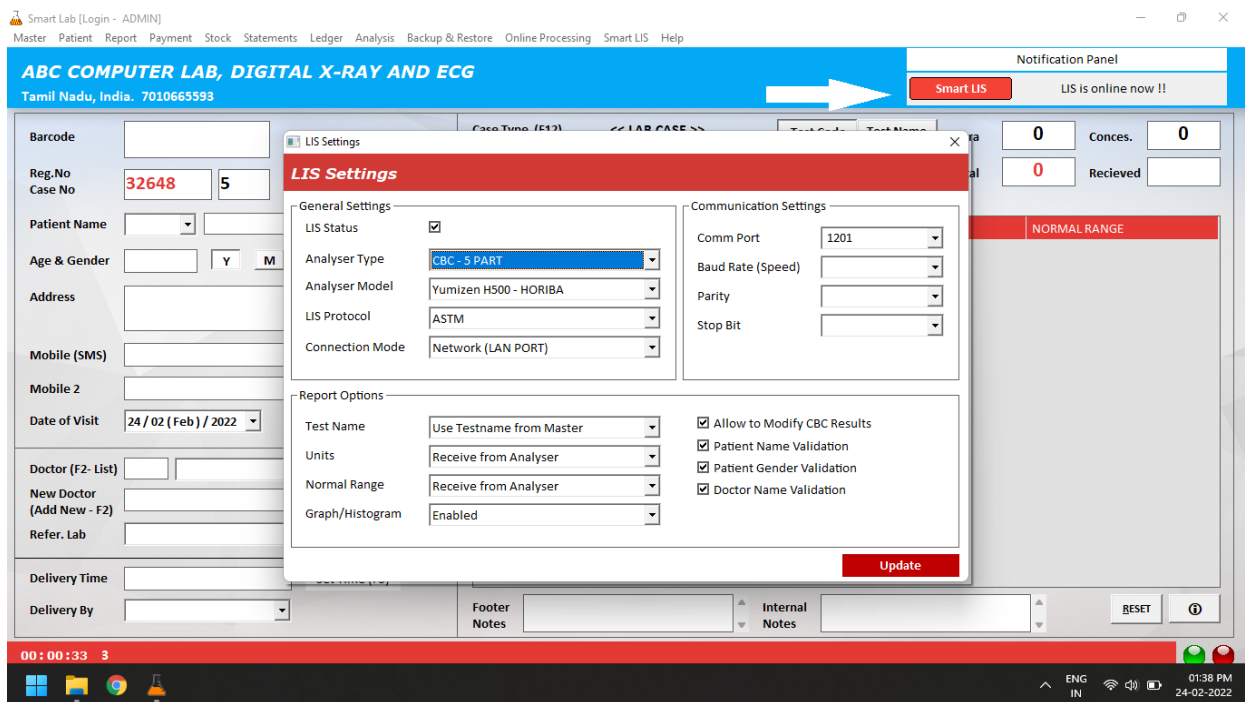
Showing Data Log

9.3)   Mobile App for Owners/Managers

eManager is a mobile application made for the laboratory owners/managers. Using mobile application, you can know the real time data of your lab.

Here is the list of data you can view from mobile app
a) Date wise patient details
b) Patient test and result details
c) View Patient Report
d) Share report to any social app (E.g. Whatsapp, Telegram etc.)
e) Date wise income details
f) Date wise due details
g) Date wise expense details
h) Doctor IC
i) Attractive day wise dashboard that shows hour wise case details.