



Standard Operating Procedure (SOP)
For the XYZ Hospital
Medical Institute, Islamabad

Lab Investigation

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Table of Contents

Standard Operating Procedure (SOP)	1
1. Document Control	<i>Error! Bookmark not defined.</i>
2. Document History	<i>Error! Bookmark not defined.</i>
2.1. Document writers and reviewer	<i>Error! Bookmark not defined.</i>
3. Change History	<i>Error! Bookmark not defined.</i>
4. Patient Enrollment	3
4.1. List of Abbreviations	3
4.2. Introduction	4
4.3. Purpose	4
4.4. Scope	4
4.5. Specific Process	5
4.6. Process Diagram	6
4.7. Roles	7
4.8. Responsibilities	8
4.9. Challenges faced by Patients at Registration	9
4.10. Improvisation by Tibbit	9
4.11. Forms/Templates to be used	12
4.12. References	26
5. Appendix	27

1. Patient Enrollment



1.1. List of Abbreviations

Abbreviation	Description
SOP	Standard Operating Procedure
XYZ Hospital	General Hospital
TibbIT	Tibb Information Technology
IP	Internet Protocol
ID	Identification
DICOM	Digital Imaging and Communication in Medicines
PACS	Picture Archiving and Communication System
MRN	Medical Record Number
QR CODE	Quick Response Code



1.2. Introduction

- ❖ Welcome to the Hospital Lab Reception Management System user manual. The software TibbIT is designed to streamline the process of generating Lab Numbers and Lab Finalized Reports at Lab Reception.
- ❖ This module is focused on the demographic information necessary to support the administrative, financial and logistic procedures.
- ❖ This manual will guide you through the various features and functionalities of the software.
- ❖ A The software is designed with a user-friendly interface, making it easy for hospital staff to navigate and utilize its features.
- ❖ Tibb Information Technology (TibbIT) Software is designed to streamline administrative tasks, enhance patient care, and improve overall efficiency within the hospital.
- ❖ By integrating various modules such as patient management, appointment scheduling, and reporting, TibbIT aims to simplify the day-to-day operations like Allotting unique numbers to the registered patients to proceed with the further process of the hospital's lab reception.

1.3. Purpose

- ❖ To provide high-quality, professional and patient-focused service that maximises the comfort and support for the patients and the staff during the whole process of the lab investigation & reporting Module.
- ❖ The purpose of this SOP is to provide guidelines for the effective use of the Lab Reception Module in the TibbIT Lab Reception Management System.

1.4. Scope

- i. This SOP applies to all hospital staff involved in using the Lab Reception Module for generating Lab Numbers and Lab Finalized Reports.
- ii. Increasing productivity and efficiency during generating the Lab Number Process.
- iii. Helping patients in acquiring comfort and consumption of less time at the receptions.



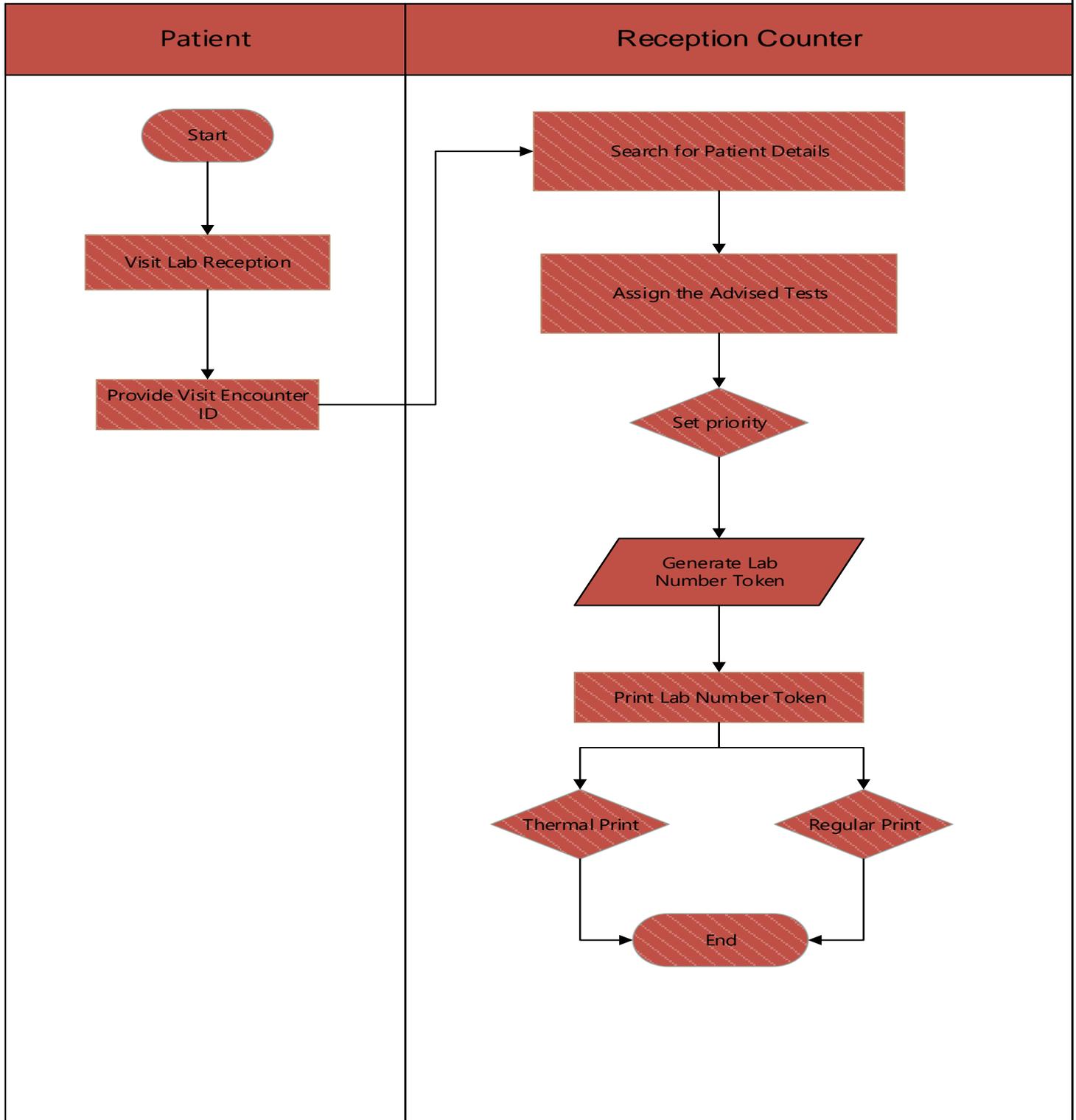
1.5. Specific Process

1. Getting started with the Lab Reception Module.
 - 1.1. The registered patient arrives at the Lab reception.
 - 1.2. The patient provides Appointment Slip having patient visit ID to the Lab Receptionist.
 - 1.3. Receptionist must connect with the network.
 - 1.4. Receptionist must login to the software.
2. Direct Investigation Module.
 - 2.1. Receptionist has to find the patient in the direct investigation module search bar.
 - 2.2. Receptionist must analyze the details of the patient.
 - 2.3. Receptionist must select the advised tests or investigations against the particular patient ID.
 - 2.4. Receptionist must save the selected tests or investigations to generate lab number.
 - 2.5. Receptionist must generate lab token number in a printed thermal or a regular print form.
3. Reporting.
 - 3.1. Patient must come to the lab reception for the seeking of his/her lab investigation reports.
 - 3.2. Patient has to provide lab token number or the particular encounter slip for having the reports.
 - 3.3. Receptionist has to search the lab number, or patient encounter ID in the reporting section of the Direct Investigation Module.
 - 3.4. Receptionist must provide the investigation reports in a printed form or upload it online on the patient's record.

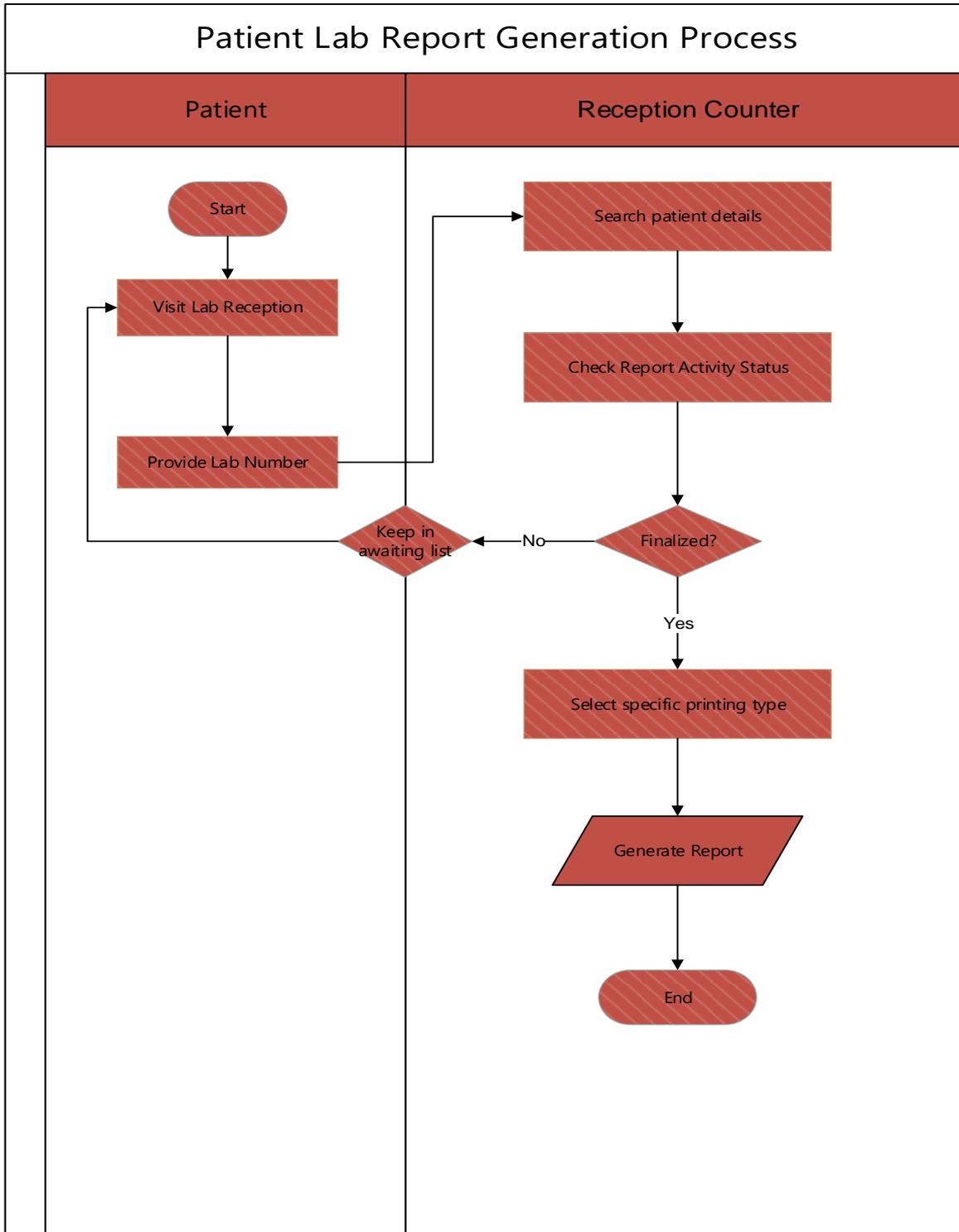
1.6. Process Diagram for Lab Issuance Number



Patient Lab Number Issuance Process



1.6.1. Process Diagram for Report Generation





1.7. Roles

Description	Patient	Lab Receptionist	Remarks
Provide Encounter ID	X		Encounter ID should be in form of Patient's Visit ID should be in digits.
Search for patient details		X	Search record to assign advised tests for the patient.
Select the particular advised tests		X	Generate Lab Number against the Encounter ID.
Provide guidance for sample submission		X	Assist patients with sample submission.
Generate Reports		X	Entertaining patients with their finalized reports.

1.8. Responsibilities

1.8.1. Generating Lab Number against the Encounter ID:

- i. The staff at the front desk are enabled to generate a Lab Number for each patient for their lab investigations.
- ii. The staff has to search the patient details through the provided Encounter ID for assigning the lab tests.
- iii. The receptionist must select the advised tab investigations against the patient's Encounter ID.
- iv. The staff must generate thermal or regular printed lab number token to proceed the patient's sample in the laboratories.

1.8.2. Generating patient's finalized test sample reports:

- i. Search the patients by their Patient's Hospital Codes (MRN, VISIT ID or Lab Number) who are already registered in the system.
- ii. View the activity status of reports.
- iii. Print patients required investigation reports.



1.9. Challenges faced by Patients at Lab Reception

- i. The immensely long waiting time for the lab investigation number process.
- ii. Manual registration hinders the efficiency of record keeping due to a huge number of people.
- iii. The long waiting time and non-computerization of the registration process create unrest among the patients while assigning the lab number.
- iv. Manual registration also downgrades the privacy of the patient's records.
- v. Also, in the case of a paper record, it is time-consuming to search and present a patient's history.

1.10. Improvisation by TibbIT

- i. Easy to search a patient's details to assign lab number token and find their investigation reports.
- ii. Effective management of patient medical tests, exam reports, records and laboratory department activities.
- iii. Queue Management will be improvised.
- iv. The computerized system improves Time management.
- v. Capability to improve efficiency.
- vi. Capability of using FHIR for Better Data Management, Better Data Mining, and Better Data Integration.
- vii. Data validation will improve the quality of data.
- viii. Capability of mobile/tablet devices will improve data entry as use of modern UI will increase user experience.
- ix. Providing all data in a single platform, enabling Business Intelligence Module to provide valuable insights into hospital operations and the quality of patient care.
- x. Safeguard the patient's report suspending any manipulation.
- xi. Categorization of the patients in the department will divide and prioritize the patient's needs.
- xii. Computerized Tracking and managing Appointments and Medications.
- xiii. SMS/Email sent to the patient when results/medication are available.
- xiv. Integrated with other FHIR resources for EMR/EHR/PHR.
- xv. Integrated with the patent mobile app so that patients can update their demographic information.



- xvi. The TibbIT will integrate the Lab Reception Management System with EHRs to ensure seamless access to patient records and test results.
- xvii. The system will send automated reminders to patients about their lab appointments, reducing no-shows and improving efficiency.
- xxviii. The TibbIT will implement advanced security measures to protect patient data and ensure compliance with privacy regulations.
- xix. The system will provide real-time reporting capabilities, allowing hospital staff to track and analyze lab reception activities.
- xx. The TibbIT will integrate the Lab Reception Management System with a mobile app, allowing patients to access their lab reports and manage appointments from their smartphones.
- xxi. The TibbIT will streamline the patient registration process, making it faster and more efficient.
- xxii. The system will provide better tracking of lab samples from collection to processing, reducing errors and improving turnaround times.
- xxiii. Patients will receive automated notifications when their lab results are ready, improving communication and patient satisfaction.
- xxiv. The TibbIT will integrate with the hospital's billing system to ensure accurate and timely billing for lab services.
- xxv. The system will improve inventory management for lab supplies, ensuring that necessary supplies are always available.
- xxvi. The TibbIT will provide customizable reporting options, allowing users to generate reports tailored to their needs.
- xxvii. The system will provide advanced data analysis tools, allowing users to analyze lab data and identify trends.
- xxviii. Users will have access to the system from mobile devices, allowing for greater flexibility and convenience.
- xxix. The TibbIT will provide comprehensive training for users to ensure they are proficient in using the system.
- xxx. The system will undergo continuous improvement based on user feedback and technological advancements.



- xxxi. The TibbIT will integrate with lab equipment to automate data collection and analysis, reducing manual errors.
- xxxii. The system will improve communication with patients, providing them with more information about their lab tests and results.
- xxxiii. The TibbIT will streamline the workflow for lab receptionists, making it easier for them to manage patient information and lab orders.
- xxxiv. The system will provide tools for accurate and efficient data entry, reducing errors and improving data quality.
- xxxv. The TibbIT will provide advanced reporting and analytics capabilities, allowing for better insights into lab operations and performance.

1.11. Forms/Templates

➤ Getting Started with LAB Reception Module

TibbIT provides range of services for the patient through the assistance of the receptionist, including:

1. Patient check-in and check-out.
2. Generating lab number to the Patients.
3. Assist patients to submit their sample on the Collection point or at their concerned laboratories.
4. Entertain Patients with their finalized reports

To start with the **TibbIT Software**, following given steps lead towards the **LAB RECEPTION** Module:

1. Connect to the Network.
2. Open any of your Web Browser.
3. Write the IP or Link Address in the Address bar i.e. tibbit.garajcloud.com/login.
4. Click **ENTER** to proceed.

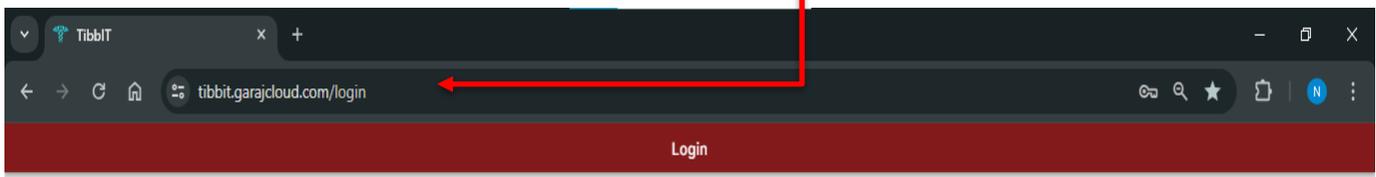


Fig. 1: IP Address

Insert **User ID** (an entity used to identify the user like a name or phone number).

Insert **Password** as ***** to log into the Account.



5. Log in with your credentials provided by the hospital administrator.

To see the **password**, press the eye icon.

6. Press the **LOGIN** Button to Log into the Dashboard.

Note: Password must be Uppercase, Lowercase, Special Character and Numbers.

Fig. 2: TibbIT Login

➤ Home Screen Page

Upon login, page will be directed to the Home Screen which refers to the successful login; else proper **credentials** are required to log in.

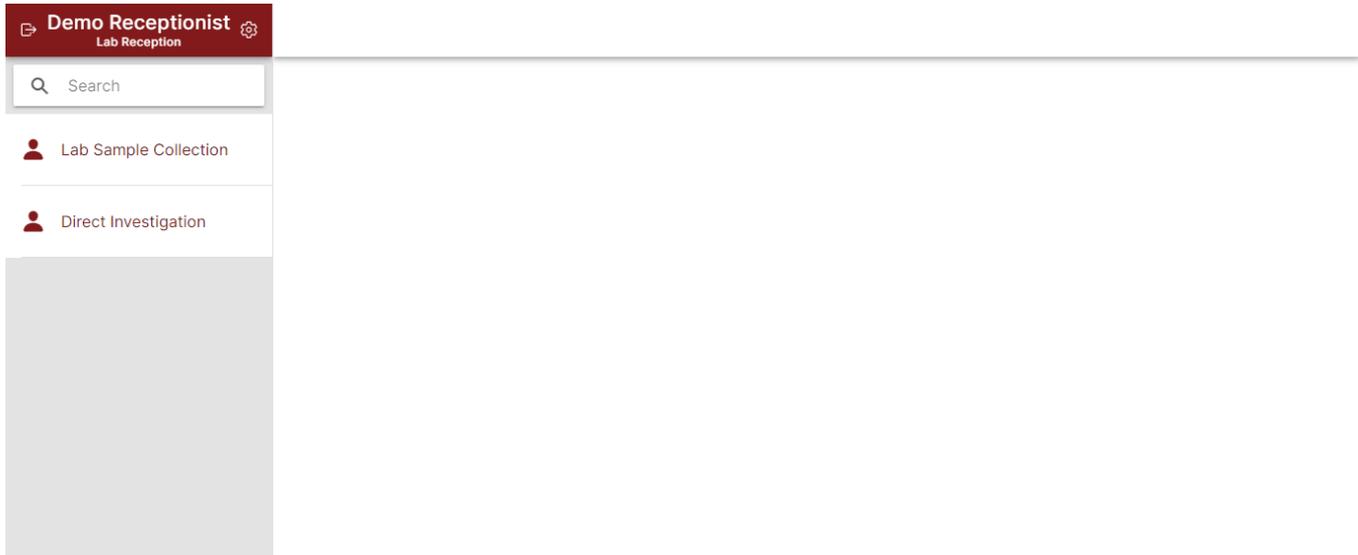


Fig. 3: Tibbit Lab Homepage

➤ Direct Investigation Module

This Module is only flexible or effective for the Tibbit registered patients in order to have their uniquely generated lab numbers for the process of their lab investigations. Flow of this process is as the registered patient appears at the lab reception; receptionist has to request patients' **VISIT ID** assigned at their appointment slip.

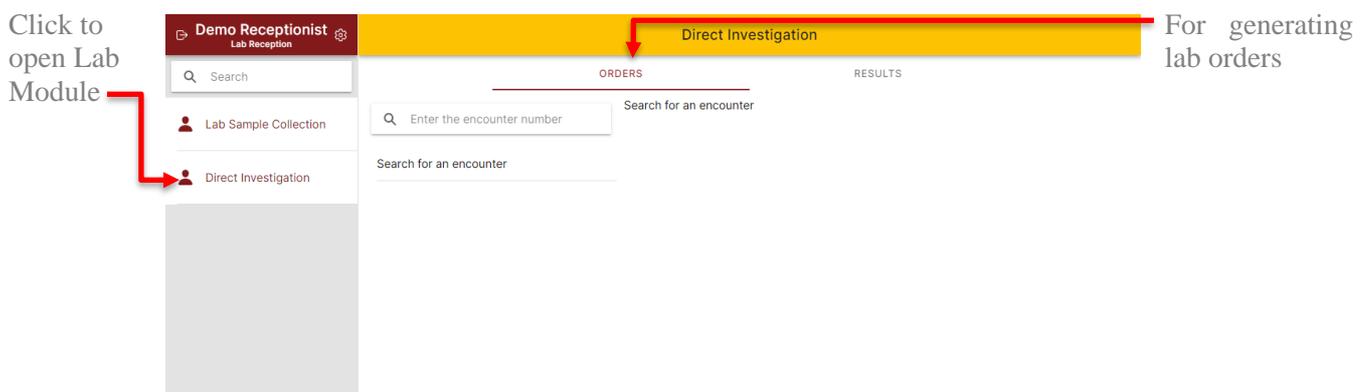


Fig. 4: Tibbit Direct Investigation Module

- **Visit ID**

VISIT ID is unique and for the multiple departments and changes at every visit. This is because of the tests assigned or suggested by the different doctors which is easy to differentiate tests for the different departments.

Federal Government Polyclinic (PGMI) Islamabad
Government of Pakistan

Token #: 128 (Medical Unit-1(R-140)(Tue,Fri))

MRN: 0-124831-01

Visit ID: 724566

Health Service: Medical Unit-1
Patient Name: Demo Test
Birth Date: 1984-07-01
Gender: Male
Appointment Time: 05-03-24 04:48 PM
Address: Address, Islamabad, Pakistan

Class 1: Yes
Father/Husband Name: Father Name
Age: 39 years, 8 months, 4 days
Practitioner Name: Dr. Rizwan Akhmed
Registered By: OPD Receptionist

Date	Department
05-03-24 01:30 PM	Spine Surgery (R-173) (Tue,Thu)
04-03-24 04:35 PM	Emergency A&E
01-03-24 09:11 AM	Medical OPD Male (Morning)(0-174)

Vitals
B.P.: _____
Temp.: _____
Diabetes: _____

Registration slip ID used for assigning lab numbers to the patient for proceeding their lab investigations

Fig. 5: Appointment Slip

- **Order Section**

At homepage a search bar is given which guides user or “Lab Receptionist” to insert or put “VISIT ID” here. On clicking the text area allows receptionist to write encounter number or visit id here leads towards the next page of the screen.

Type VISIT ID from the appointment slip here

Press ENTER to proceed next

Demo Receptionist Lab Reception

Direct Investigation

ORDERS RESULTS

Search for an encounter

724566

Press enter to search

Fig. 6: Encounter Search

After clicking **ENTER** the following screen appears shows the Patient's details, a **search bar** with dropdown (on click) and **List of Tests** selected from the dropdown for the particular patient.

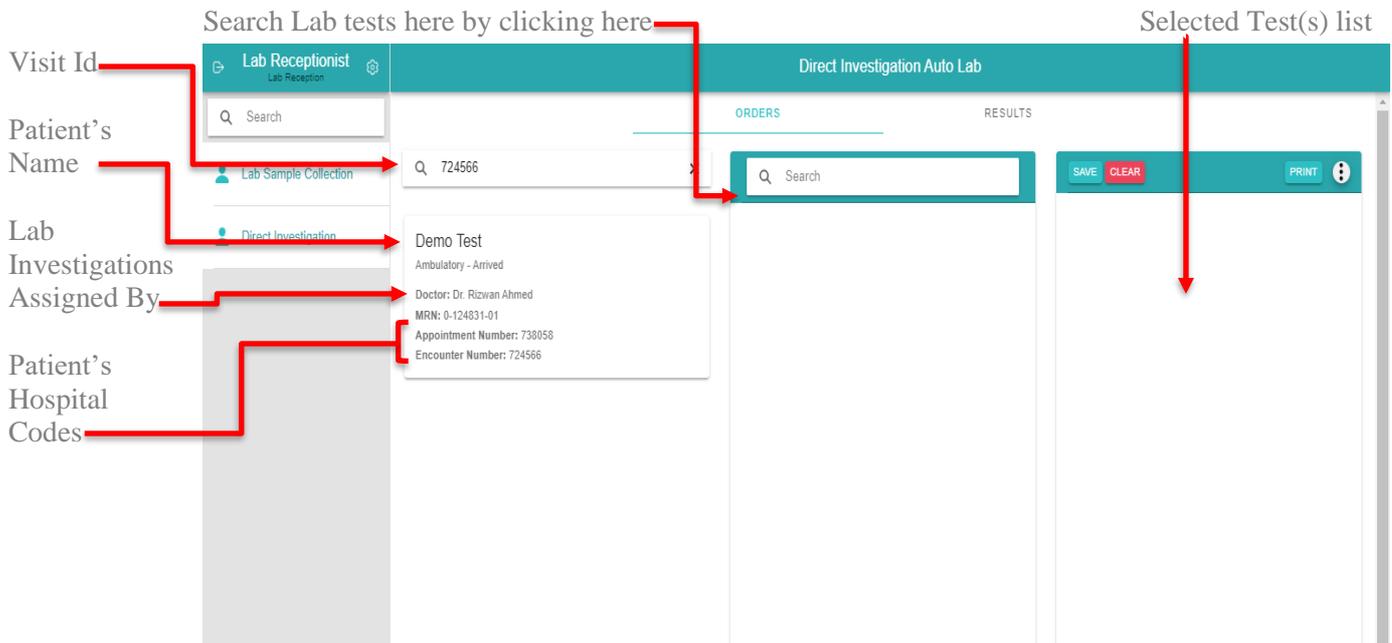


Fig. 7: Patient details and test selection area

On clicking the search bar for selecting the tests a dropdown appears showing the list of the test to be selected. The flow of this process is to select the search bar then type the initial letters or the test names to be selected then use **TAB** key to go through the drop down then hit **ENTER** to select the desired test.

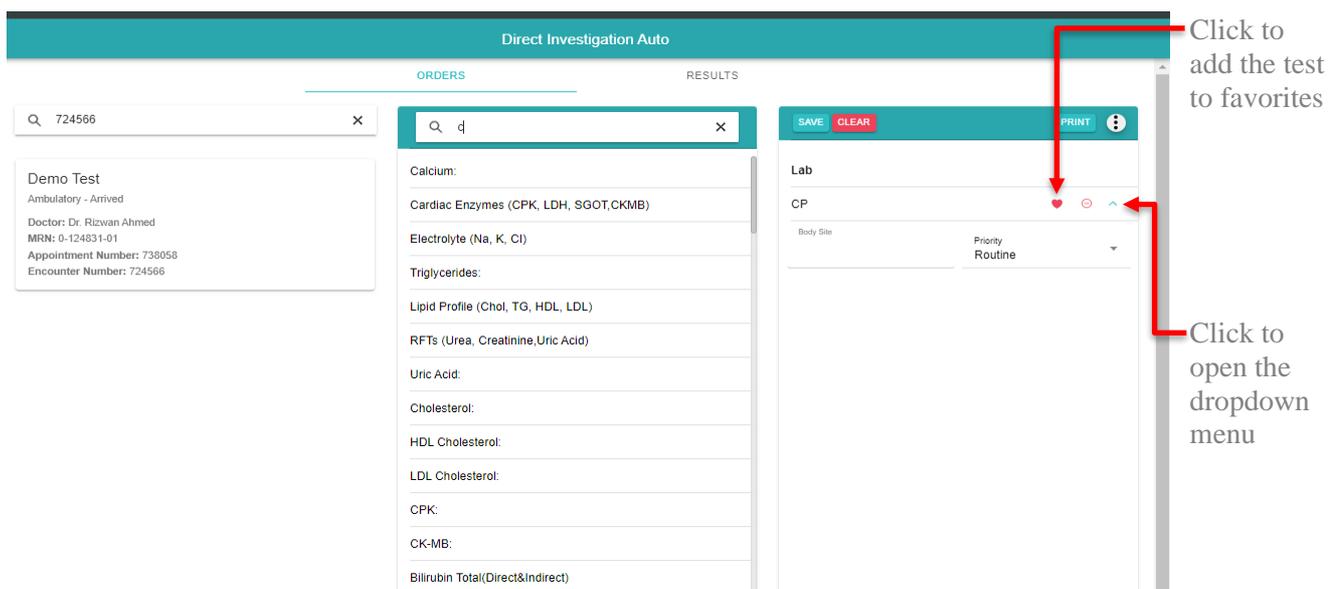


Fig. 8: Assigning test

With the selected test a dropdown button appears having fields of body site dropdown where the sample will be collecting and the priority set dropdown to be selected according to the patient's condition.

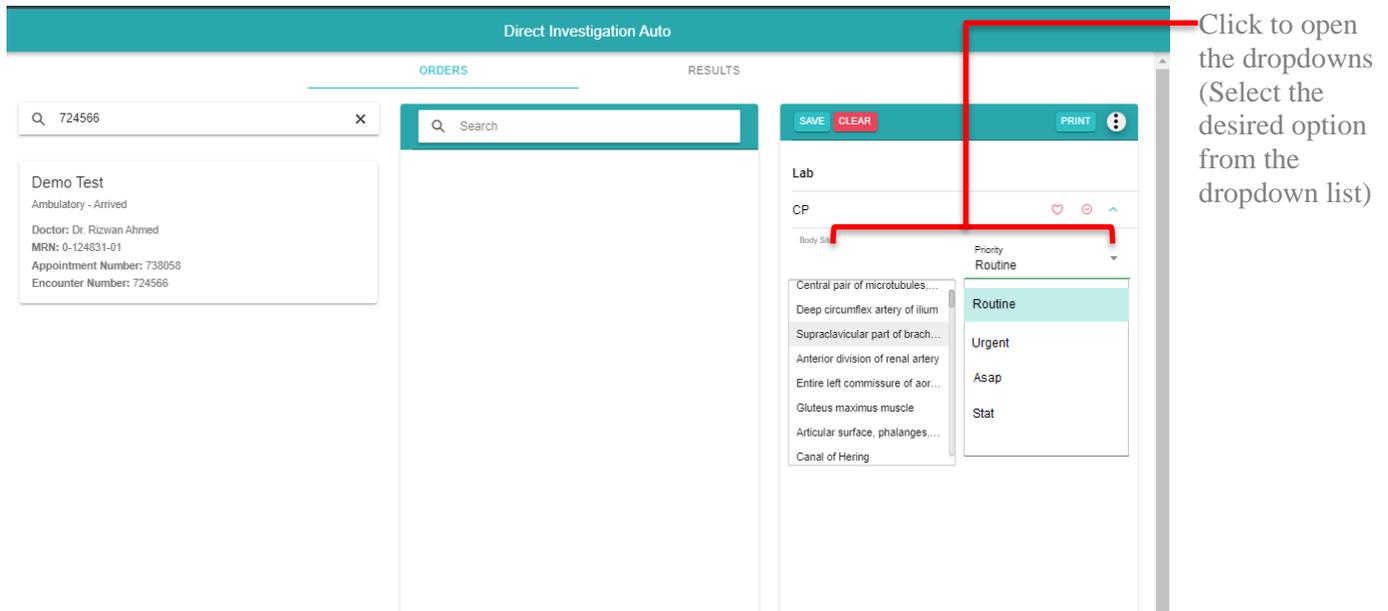


Fig. 9: Selected test dropdown

- **Clear Selected Test**

The Lab Orders page also contains option for deleting the test in case of selecting the wrong test. It helps to remove the test so that receptionist could add the correct ones.

Whole Selected tests area can also be deleted as clicking on the CLEAR Button

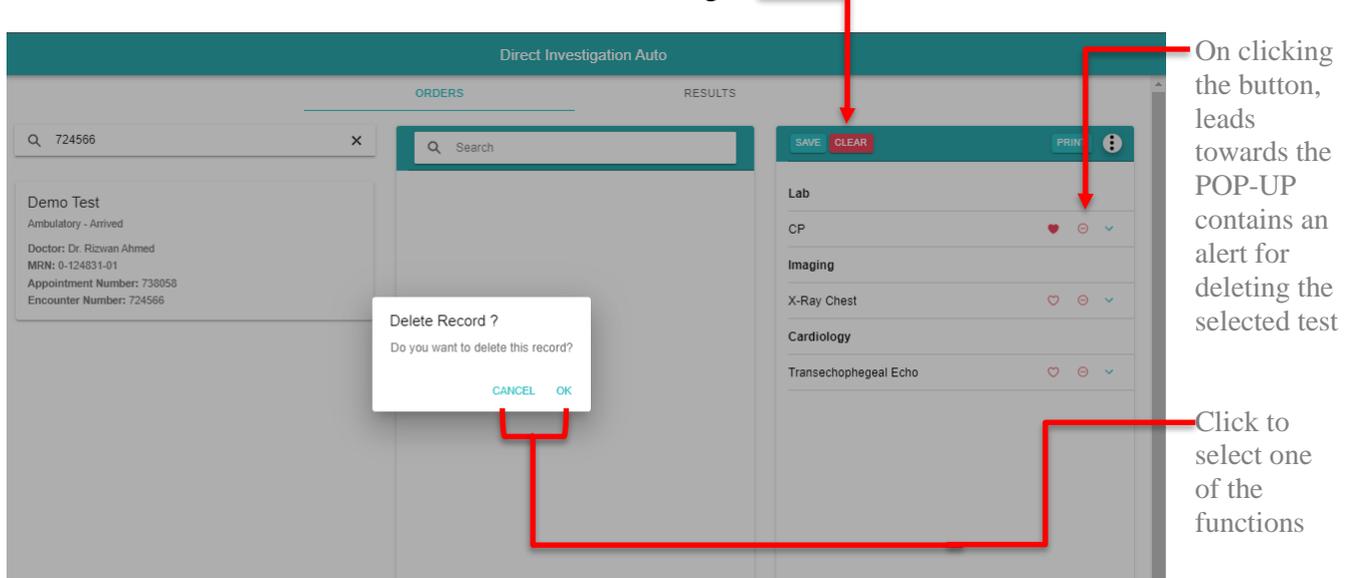


Fig. 10: Clear test

- **Print Options**

Orders page has a dropdown for selection one of the options for printing the investigation number. Small print gives a print from a thermal printer whereas Regular print is from the A4 printer.

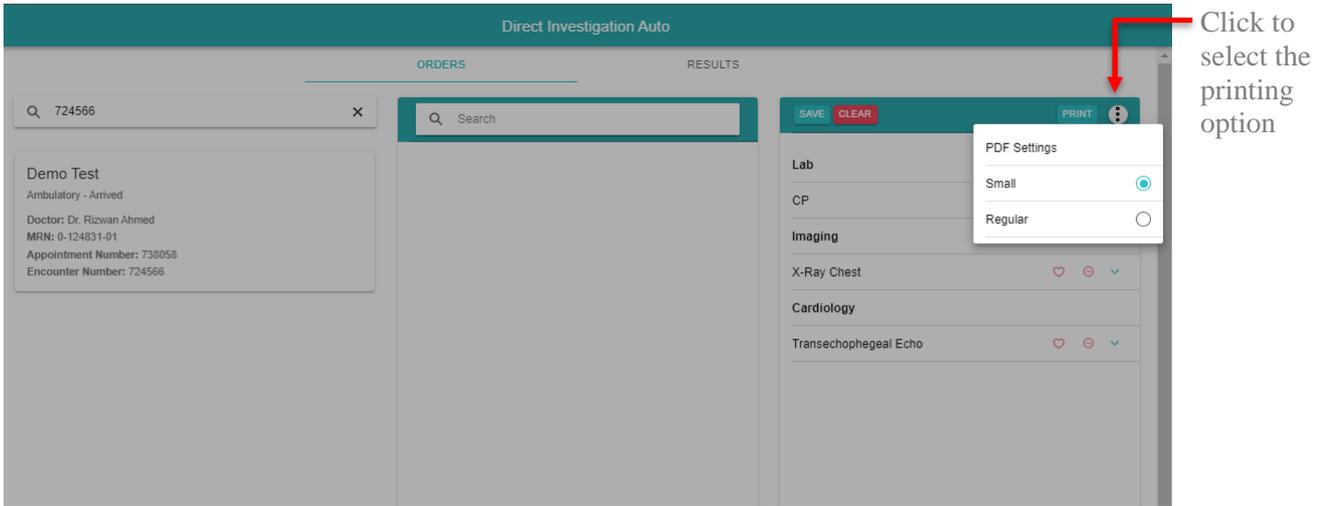


Fig. 11: Print options

- **Save Investigations**

After selecting the desired option for printing the token, following button leads towards the printable form of the selection.

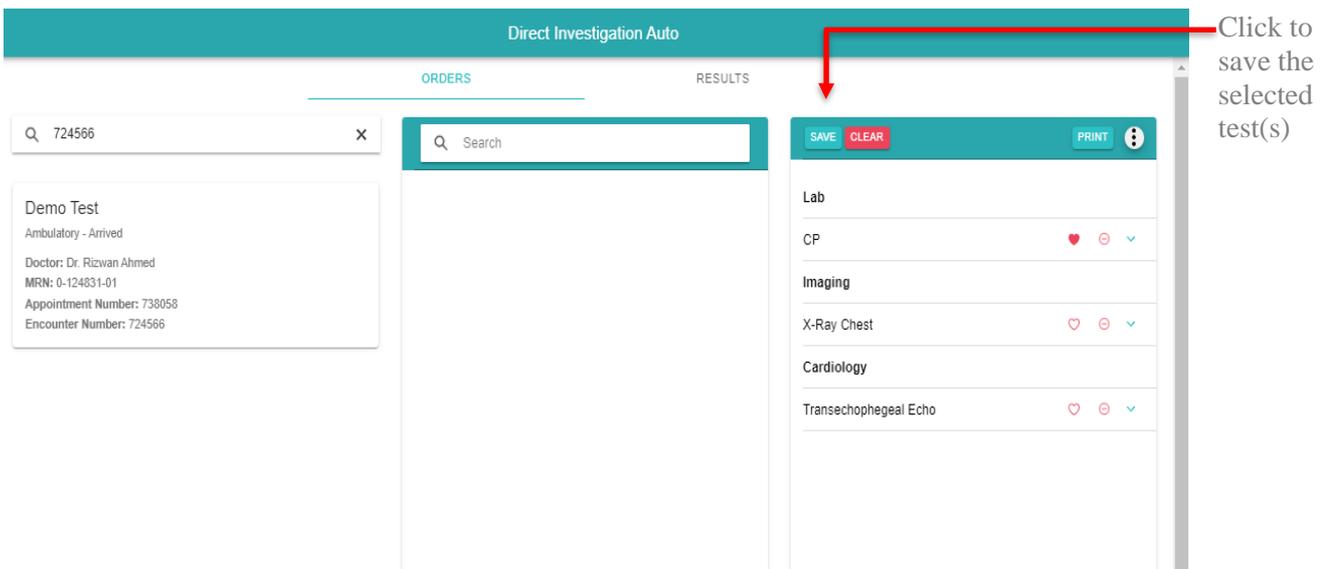


Fig. 12: save investigations

On clicking the SAVE button print preview with its specific selection appears having certain information at it.

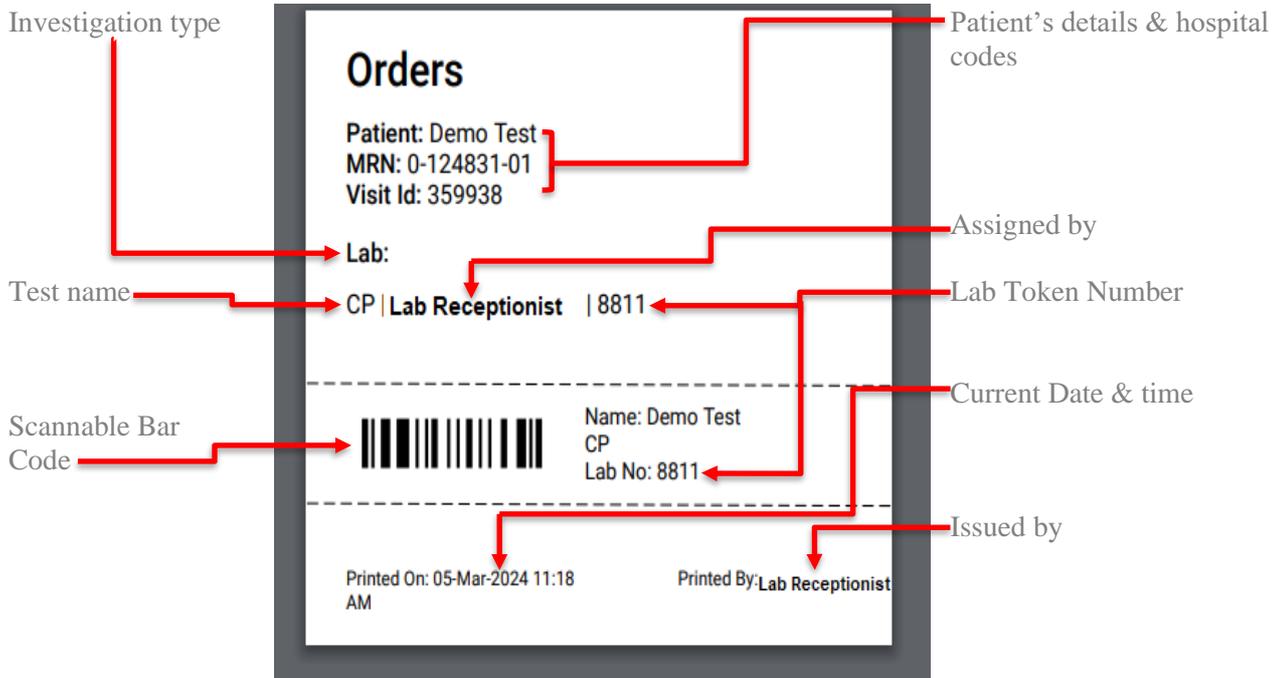


Fig. 13(a): small print (single test) (thermal token)



Fig. 13(b): small print (multiple test) (thermal token)

Scannable MRN and Visit Id

Patient's Details

Reason(s) for having lab investigations

For accessing the mobile application for having reports

Investigation Information/Details

Federal Government Polyclinic (PGMI) Islamabad
Orders Report

Token# 152

MRN: 0-124831-01

Visit ID: 359938

Organization: Federal Government Polyclinic (PGMI) Islamabad
 Department Name: Medical OPD Male (Morning)(R-174)
 Patient Name: Demo Test
 Birth Date: 1984-07-01
 Gender: Male
 Address: Address, Islamabad, Pakistan

Sub department: N/A
 Father/Husband Name: Father Name
 Age: 39 years, 8 months, 4 days
 Practitioner Name: Dr. Faiza Sajad

Lab Orders

Service number	Lab Number	Test	Ordered By
463682	8831	CP	Lab Receptionist

Problems
 Cough (R05)
 Typhoid fever (A01.0)
 Headache (R51)
 Multiple myeloma in remission (C90.01)

Fig. 13 (c): Regular print

➤ Reporting

After generating and proceeding lab investigations, RESULT Section of the Direct Investigation Module helps in generating Reports for the selected investigations.

Select the search mode in which reports are needed to be searched

Reporting Section

Select the starting and ending date & time from which reports are being searched

Demo Receptionist Lab Reception

Direct Investigation

Start Date: Feb 2, 2024 7:00 PM

End Date: Mar 2, 2024 6:59 PM

Search Mode: Visit ID

Lab Sample Collection

Direct Investigation

Visit ID

Lab Number

MRN

Service Request Number

REFRESH

Enter the encounter number

Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
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Fig. 14: Reporting section

Printable reports have the status of FINISHED while uncomplete reports are having the status of either SPECIMEN COLLECTED or IN PROGRESS.

➤ Search Modes

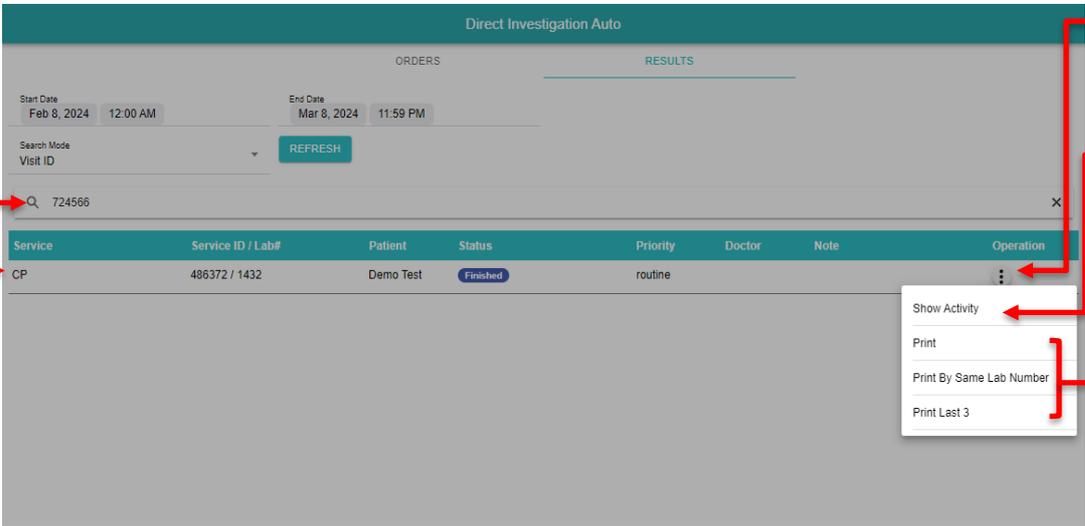
A test report can be searched by the following search modes which are needed to be added for tracking the patients' lab reports by any possible method.

- **Search By Visit ID**

The VISIT ID which is shown in the fig. 5 (appointment slip) is needed if the patient misplaced his/her lab number slip and wants to have the lab reports so VISIT ID is one of the solutions to tack the reports.

Enter number according to the search mode here

Performed test



Click to open dropdown

Click to view the details of test performed

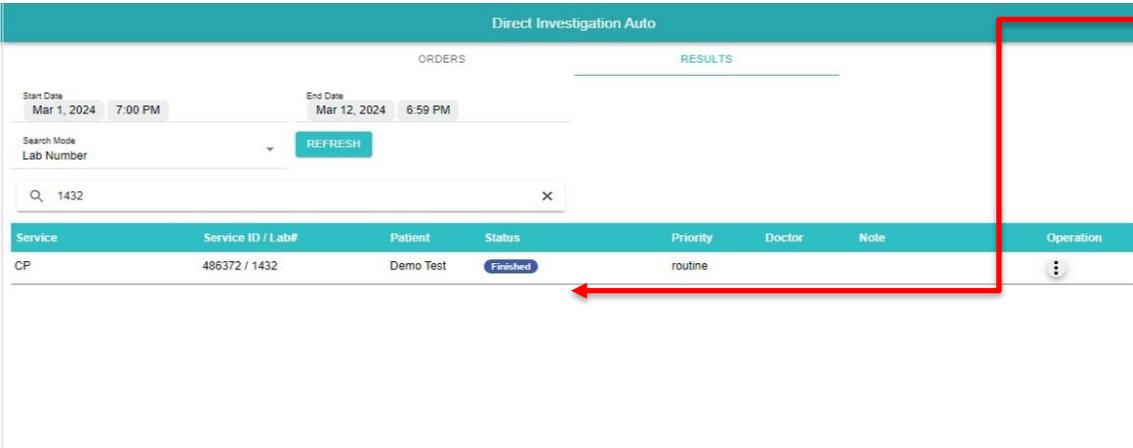
Click to print a/c to the need

Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CP	486372 / 1432	Demo Test	Finished	routine			⋮

Fig. 15 (a): Search by VISIT ID

- **Search By Lab Number**

The lab number is the basic and main search mode my which a report can be traced. It is generated directly by the Lab receptionist against the visit id of the patient.



Shows that report is finalized

Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CP	486372 / 1432	Demo Test	Finished	routine			⋮

Fig. 15 (b): Search by Lab Number

- **Search by MRN number**

The MRN is the other option if by any reason, reports can't be appeared by the VISIT ID or the LAB NUMBER.
NOTE: Use dash (-) or write the MRN as it is as its format i.e. 0-124831-01



Shows that the test or the sample is still pending to work on or scheduled to process

Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CP	479649 / 8954	Demo Test	Specimen Collected	routine			⋮
CP	479818 / 9028	Demo Test	Specimen Collected	routine			⋮
Transepchopegeal Echo	486371 / N/A	Demo Test	Checked In	routine			⋮
CP	486372 / 1432	Demo Test	Finished	routine			⋮

Fig. 15 (c): Search by MRN

- **Search By Service Request Number**

It is mostly needed for the reports other than LAB category like cardiology, radiology, imaging etc. It is because as these categories have DICOMS or imaging in it and form a graphical or visuals as output or result. These tests generated a Service Request Number as it has to be inserted on DICOM devices. A separate Data Server is present or connected with the network named PACS Server to view the DICOMS on it. Lab category tests also show or generate service request number they aren't much interlinked with any external devices.



Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CP	486372 / 1432	Demo Test	Finished	routine			⋮

Fig. 15 (d): Search by Service Request Number

On clicking SHOW ACTIVITY from the above dropdown list, a pop-up appears having the time of submitting sample, time of completing/performing sample, sample test performing by and reports signed by with the performer details.

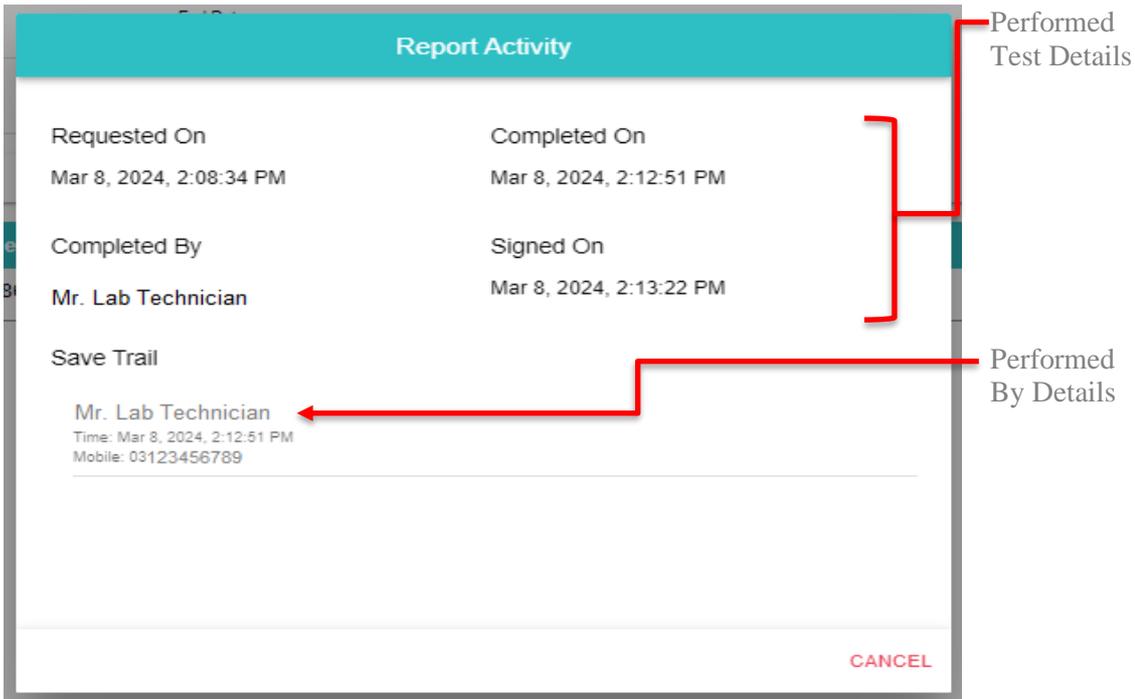
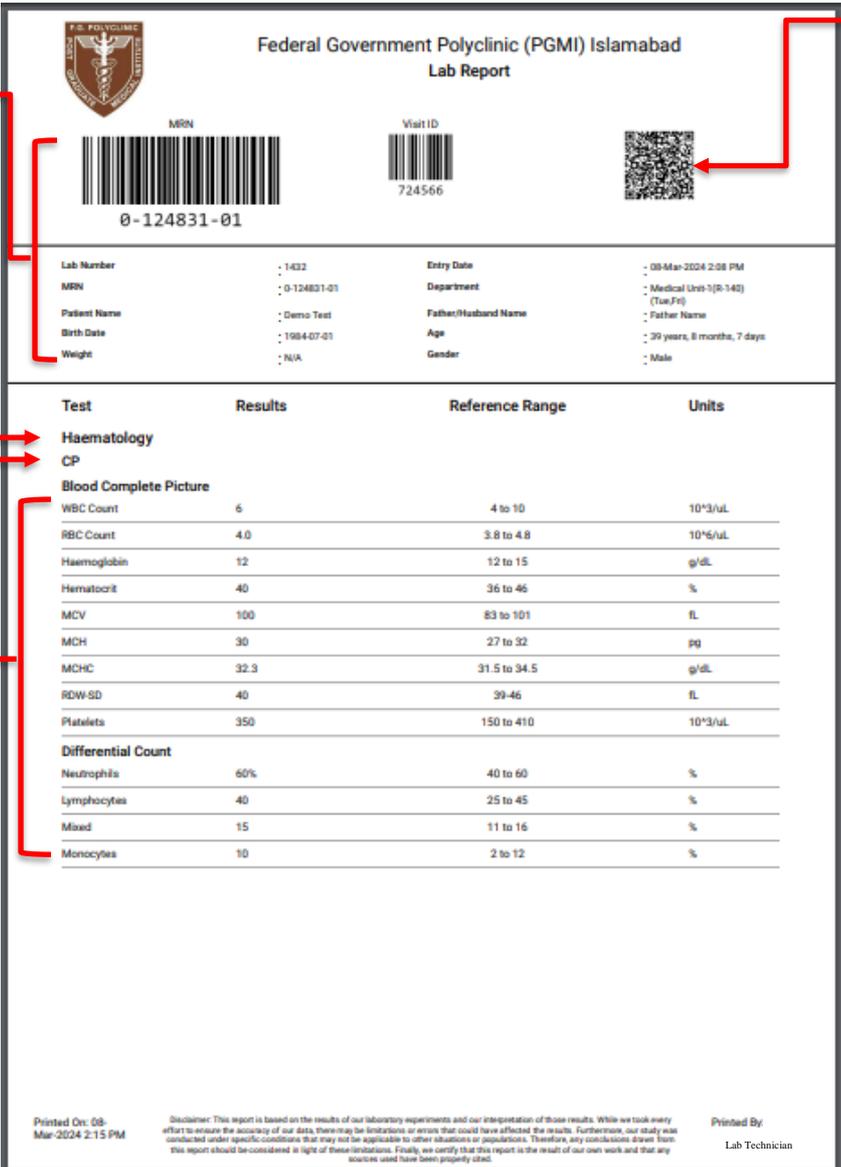


Fig. 16: Show Activity

After clicking the desired option for the print, a preview for the completed reports appears having the patient details, test details with its perimeters.



Federal Government Polyclinic (PGMI) Islamabad
Lab Report

MRN: 0-124831-01
Visit ID: 724566

QR Code: [QR Code]

Test Category: Haematology CP

Test Name: Blood Complete Picture

Test perimeters: WBC Count, RBC Count, Haemoglobin, Hematocrit, MCV, MCH, MCHC, RDW-SD, Platelets, Neutrophils, Lymphocytes, Mixed, Monocytes

Test	Results	Reference Range	Units
Blood Complete Picture			
WBC Count	6	4 to 10	10 ³ /uL
RBC Count	4.0	3.8 to 4.8	10 ⁶ /uL
Haemoglobin	12	12 to 15	g/dL
Hematocrit	40	36 to 46	%
MCV	100	83 to 101	fL
MCH	30	27 to 32	pg
MCHC	32.3	31.5 to 34.5	g/dL
RDW-SD	40	39-46	fL
Platelets	350	150 to 410	10 ³ /uL
Differential Count			
Neutrophils	60%	40 to 60	%
Lymphocytes	40	25 to 45	%
Mixed	15	11 to 16	%
Monocytes	10	2 to 12	%

Printed On: 08-Mar-2024 2:15 PM
Printed By: Lab Technician

Fig. 17: Reporting Print Preview

➤ Tibbit Settings

Tibbit provides some setting options to entertain receptionist. These settings are essential or basic for a receptionist to have them. These settings include:

1. Change Password
2. Clear Cache

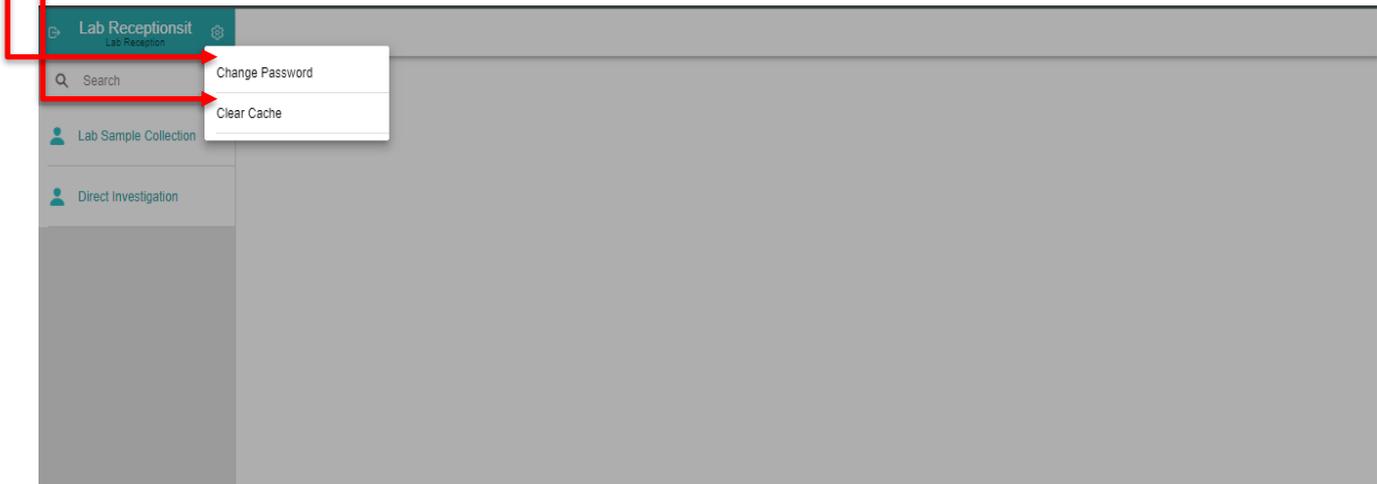


Fig. 18: Settings

If the Hospital's Administration grant receptionist an authority to change the Password, then on clicking **"CHANGE PASSWORD"** option mentioned below drop-down appears having several fields for changing password

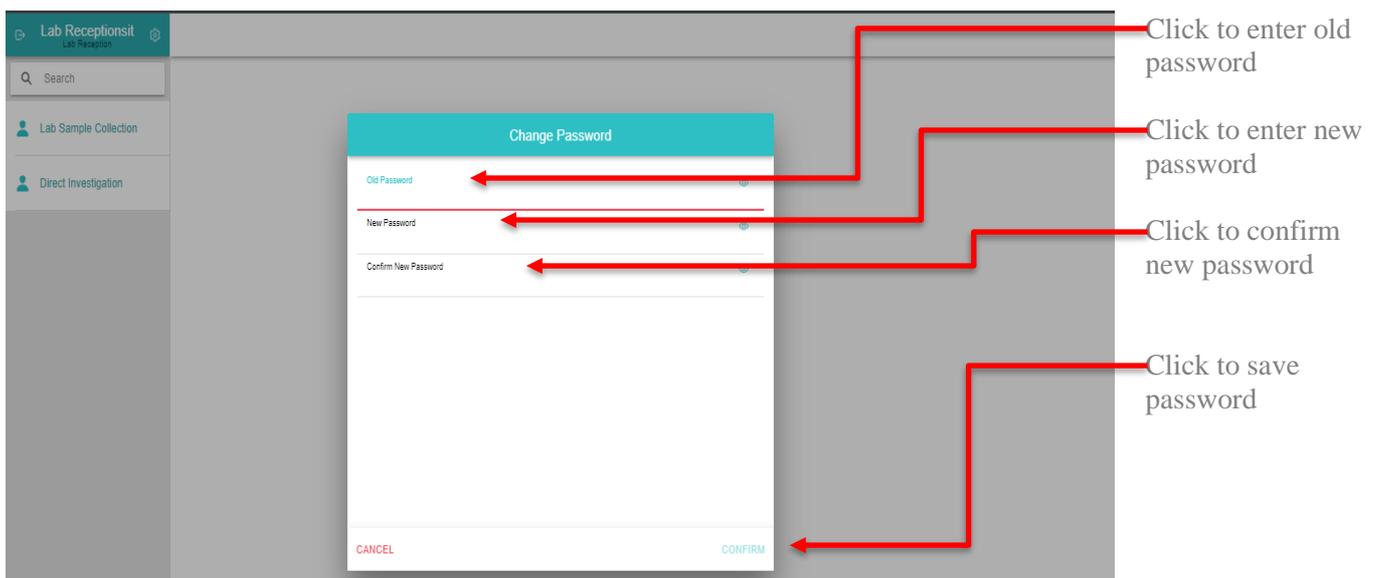


Fig. 19 (a): Change Password

If the receptionist faced any instability regarding using the software, then the other option than the change password is effective in this way. On clicking “**CLEAR CACHE**” will lead towards the alert box indicating the **CONFIRM** button to clear it.

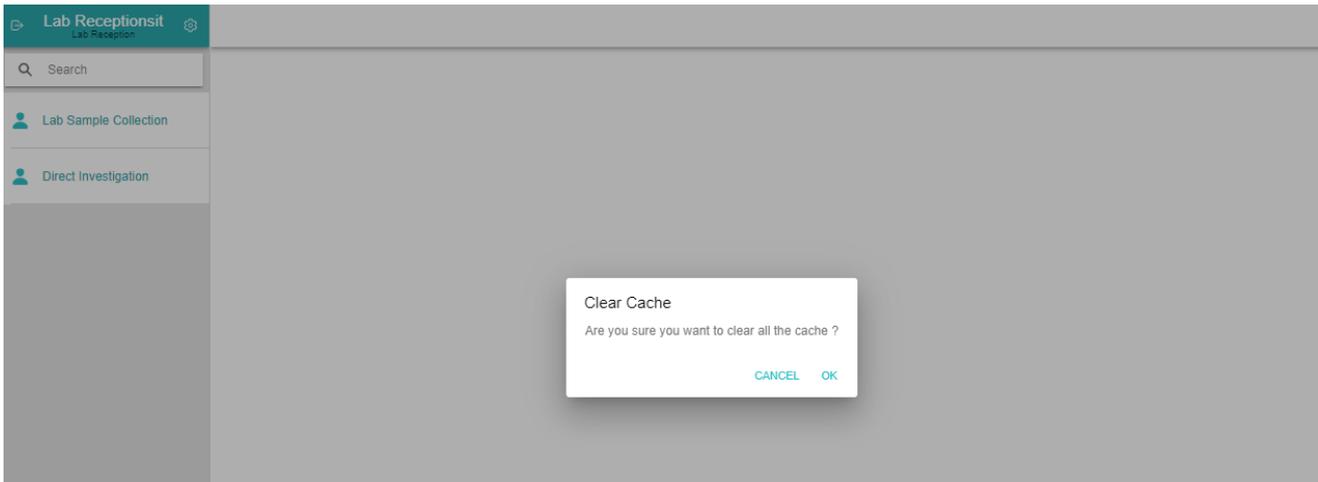


Fig. 19 (b): Clear Cache

➤ Logout from the Tibbit Software

To close or take yourself out from the E-Healthwatch Software, mentioned button on the Home Screen gives that availability to do so.

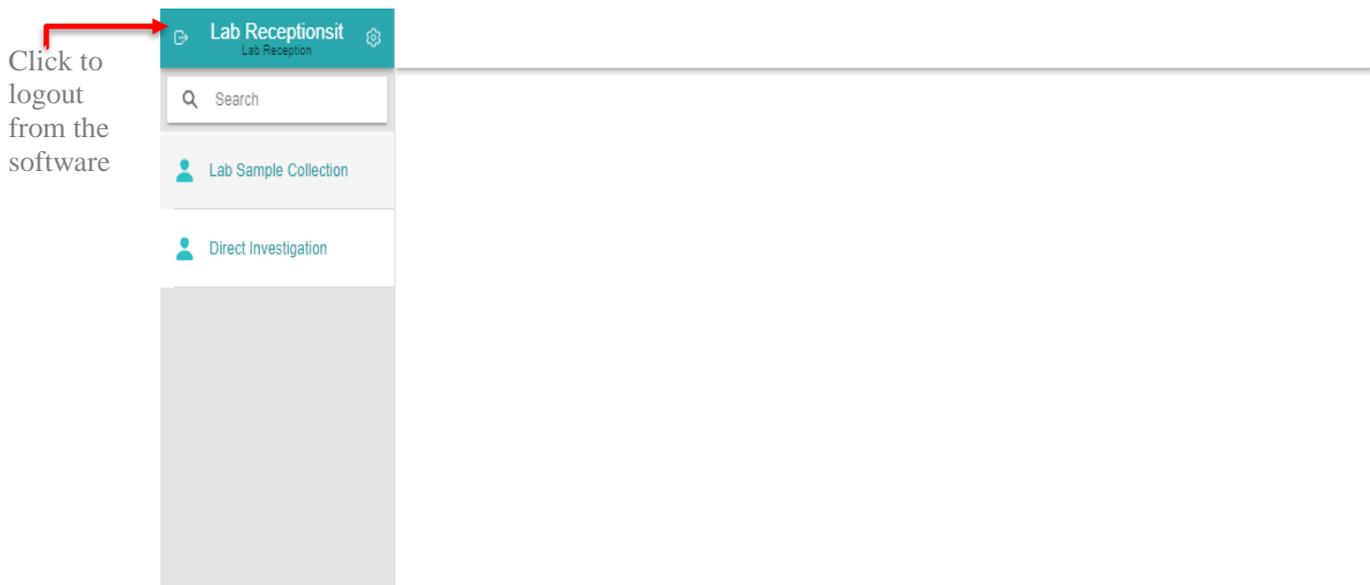


Fig. 20: Logout



1.12. References

(References will be attached when provided)

2. Appendix

