



## **Cardiology Modules**

**User Manual For Cardiology Reception**

JAZZ-GarajCloud

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## INTRODUCTION

Welcome to the Cardiology Department Module of the Hospital Management System. This module streamlines the process of managing cardiology patient data, test requests, test results, and report finalization. This manual will guide you through the various features and functionalities of the Tibb Information Technology (TibbIT) software. It is the DICOM Modules where the patient's reports will appear in an imaging form.

## SYSTEM OVERVIEW

The software is designed with a user-friendly interface, making it easy for hospital staff to navigate and utilize its features. Our Hospital Management System Software is designed to enhance patient care and improve overall efficiency within the hospital. By integrating various modules such as patient management, appointment scheduling, and reporting, Tibb Information Technology (TibbIT) is the software used for providing healthcare services to patients. This software aims to simplify the day-to-day operations like Allotting unique numbers to the registered patients to proceed with the process of the cardiology DICOM Modules.

The devices used to perform cardiology-related tests will be integrated into the system so that the results of the tests can easily be shown in the DICOM module on the PACS Server.

## GETTING STARTED WITH THE CARDIOLOGY MODULES

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

1. Patient check-in and check-out.
2. Generating Service IDs for the Patients.
3. View DICOM images of the patient's tests.
4. Entertain Patients with their finalized reports.

To start with the **TibbIT Software**, the following steps lead towards the **CARDIOLOGY** Module:

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

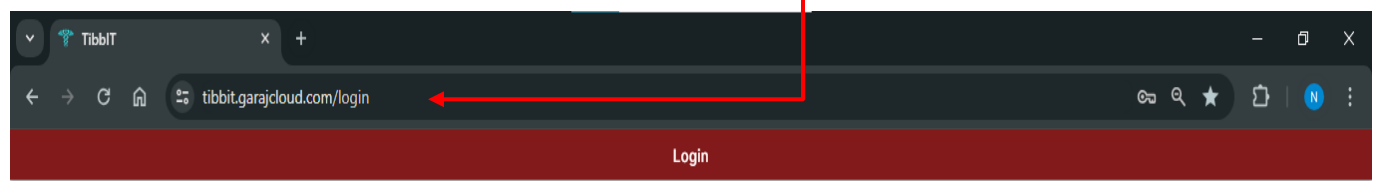


Fig. 1: Link Address

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. Login 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 Characters, and Numbers.*

Fig. 2: TibbIT Login

## HOME SCREEN PAGE

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

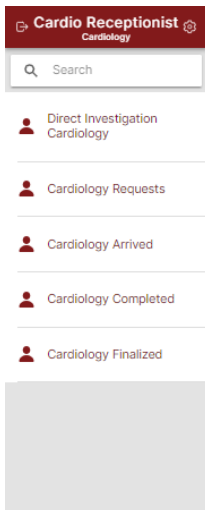


Fig. 3: TibbIT Cardiology Homepage

## CARDIOLOGY INVESTIGATION MODULE

This Module is only flexible or effective for the TibbIT registered patients to have their uniquely generated lab numbers for the process of their lab investigations. The Direct Investigation module allows receptionists to enter patient encounter numbers, view patient data, select specific tests, and generate token numbers or service IDs for the selected tests. The workflow of the cardiology module is that when the patient having an appointment slip arrives at the cardio-test performing area, the medical officer (MO) inserts the **Visit Encounter Number**, which is on the appointment slip, in the cardiology investigation module. After selecting the test, the module then generates the **SERVICE ID** against the selected tests. The generated **SERVICE ID** is used throughout the process of the cardiology test.

### STEPS:

1. Enter the patient encounter number.
2. View the patient's data.
3. Select the specific tests.
4. Save the selected tests and generate a token number or service ID.

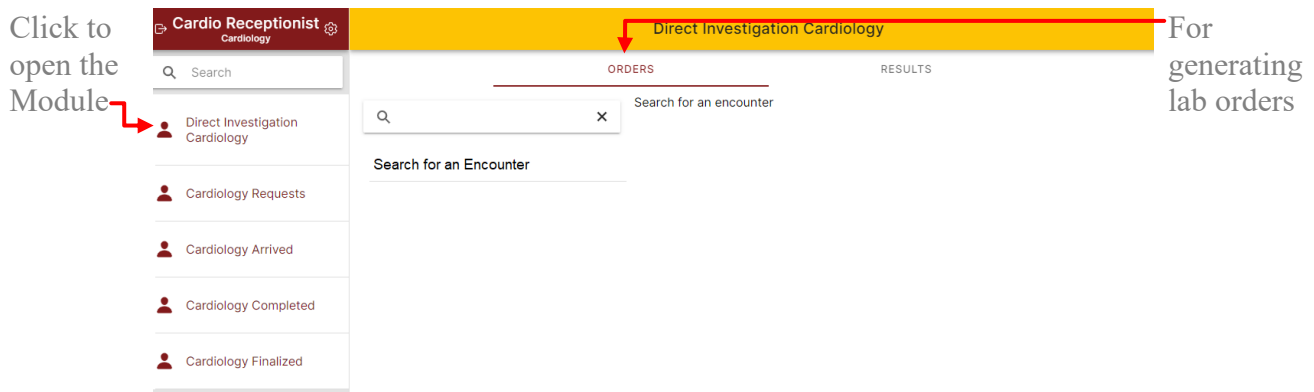


Fig. 4: TibbIT Direct Investigation Module

### PRINT PREVIEW

After saving the selected tests, a print preview is available for the receptionist to review the selected tests and print the token number or service ID for the patient. Patients can have their token number slip as a regular A4 Print or a thermal print.

• VISIT ID

VISIT ID is unique 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.

**Token #: 128 ( Cardiology Department )**

MRN: 0-124831-01

Visit ID: 724566

Health Service	قسم : Cardiology Department	Class 1	: Yes
Patient Name	نام : Demo Test	Father/Husband Name	والد الشیر کا نام : Father Name
Birth Date	پیدائش تاریخ : 1984-07-01	Age	عمر : 39 years, 8 months, 4 days
Gender	جنس : Male	Practitioner Name	: ABC Doctor
Appointment Time	: 05-03-24 04:48 PM	Registered By	: Cardiology User
Address	: Address, Islamabad, Pakistan		

0-124831-01) آپ کا میڈیکل ریکارڈ نمبر ہے جب آپ بولی کلینک پھینال آتے تو براہ کرم اسے اپنے ساتھ لائیں۔

Provisional Diagnosis		Treatment		Visit History	
1.	_____			Date	Department
2.	_____			05-03-24 01:30 PM	Spine Surgery (R-172) (Tue,Thu)
3.	_____			04-03-24 04:36 PM	Emergency A&E
4.	_____			01-03-24 09:11 AM	Medical OPD Male (Morning)(R-174)
5.	_____				

**Presenting Complaints**

**Vitals**

B.P: \_\_\_\_\_

Temp. \_\_\_\_\_

Diabetes. \_\_\_\_\_

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

Fig. 5: Appointment Slip

• ORDER SECTION

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

Type VISIT ID from an appointment slip here

Press ENTER to proceed next

**Cardio Receptionist** Cardiology

**Direct Investigation Cardiology**

ORDERS RESULTS

Search for an encounter

724566

Press enter to search

- Direct Investigation Cardiology
- Cardiology Requests
- Cardiology Arrived
- Cardiology Completed
- Cardiology Finalized

Fig. 6: Encounter Search

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

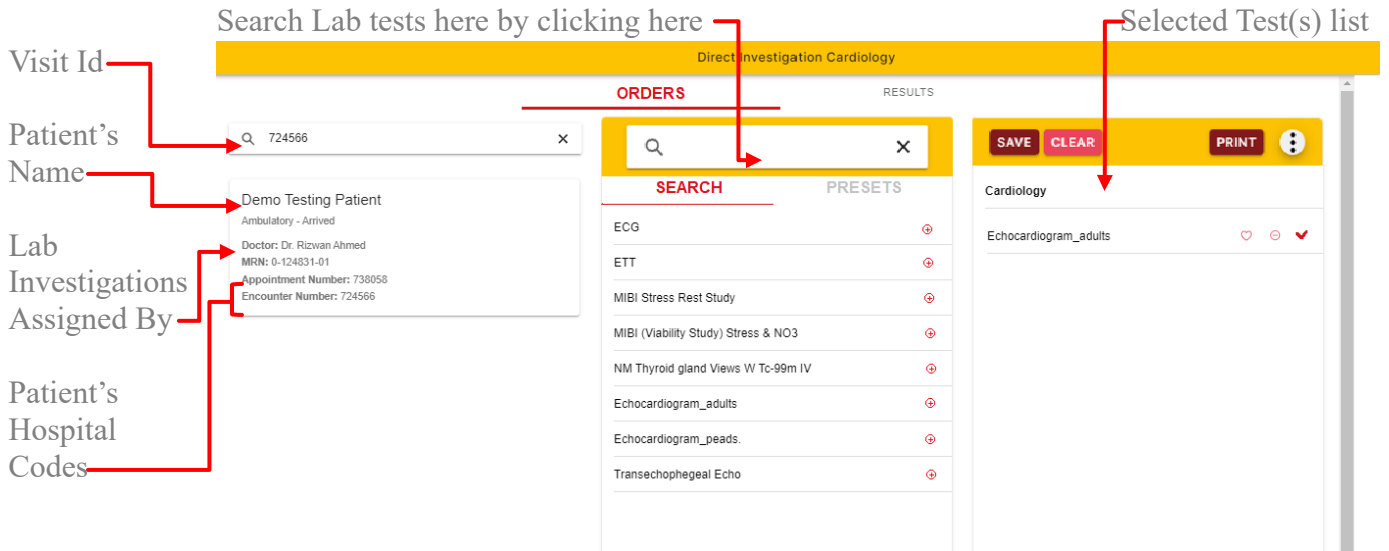


Fig. 7: Patient details and test selection area

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 type the initial letters or the test names to be selected then use the **TAB** key to go through the drop-down then hit **ENTER** to select the desired test.

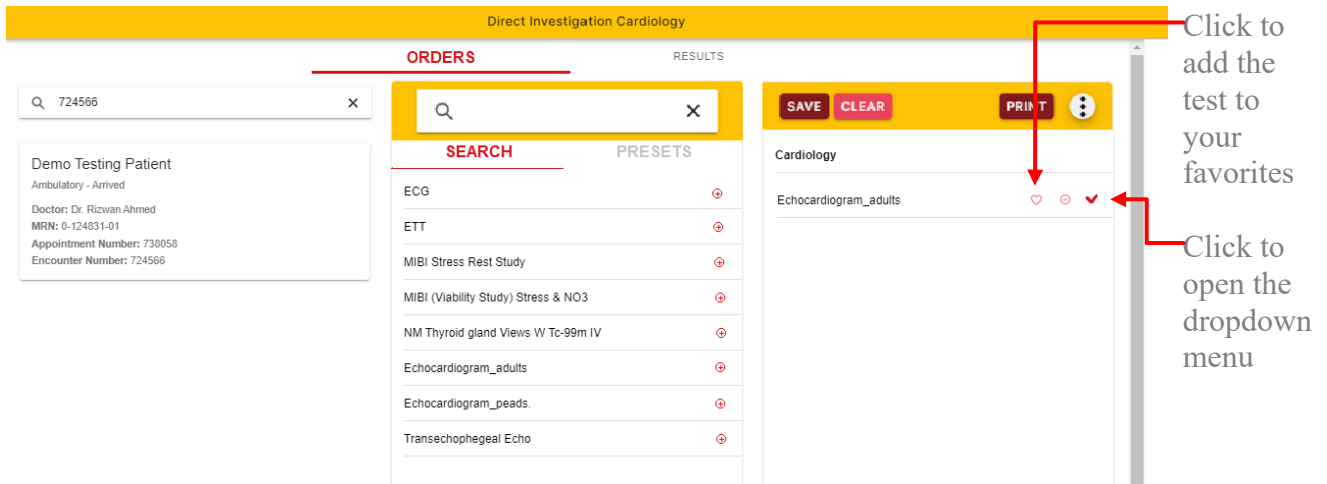


Fig. 8: Assigning test

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

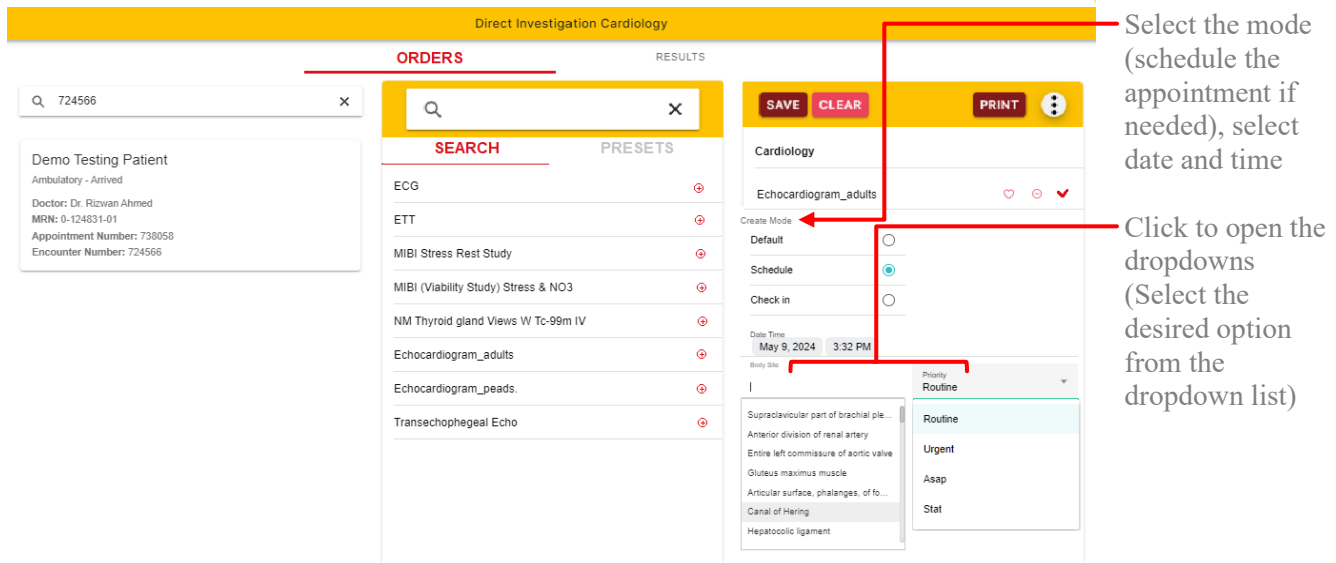


Fig. 9: Selected test dropdown

### • CLEAR SELECTED TEST

The Lab Orders page also contains an option for deleting the test in case of select the wrong test. It helps to remove the test so that the user can add the correct ones.

The Whole Selected test area can also be deleted by clicking on the CLEAR Button

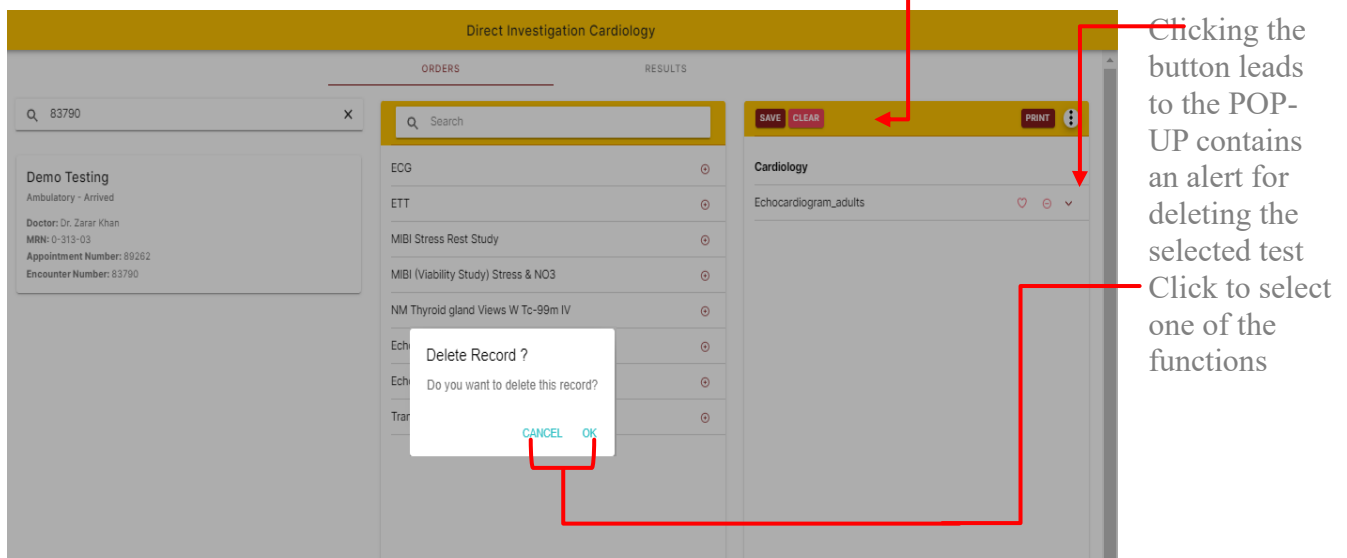


Fig. 10: Clear test



## • PRINT OPTIONS

The orders page has a dropdown for selecting 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.

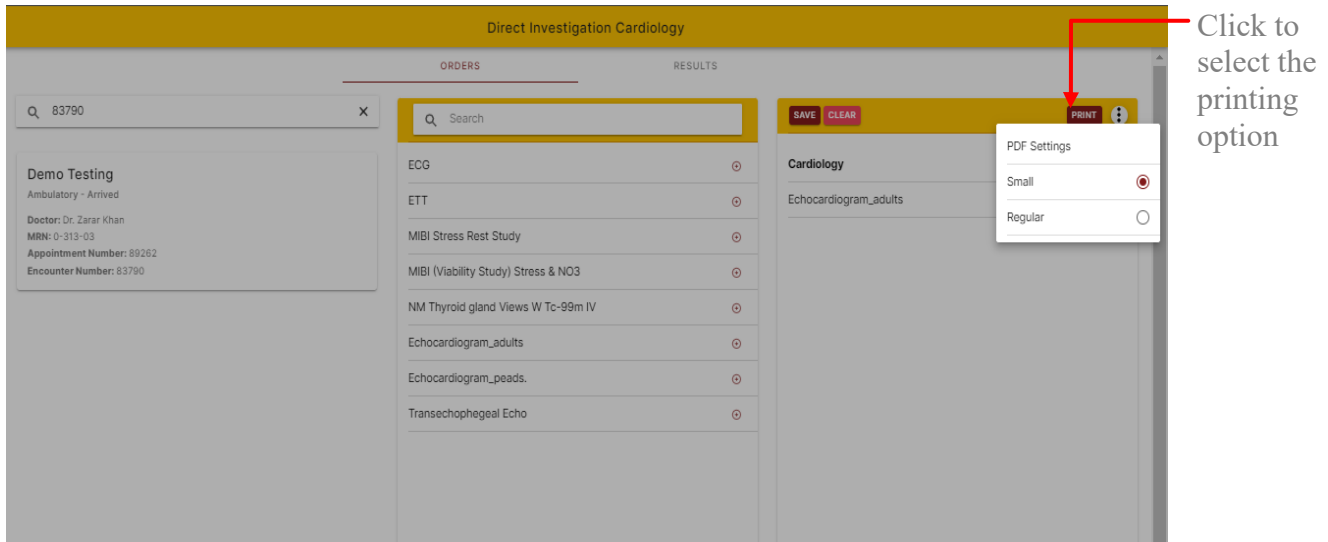


Fig. 11: Print options

## • SAVE INVESTIGATIONS

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

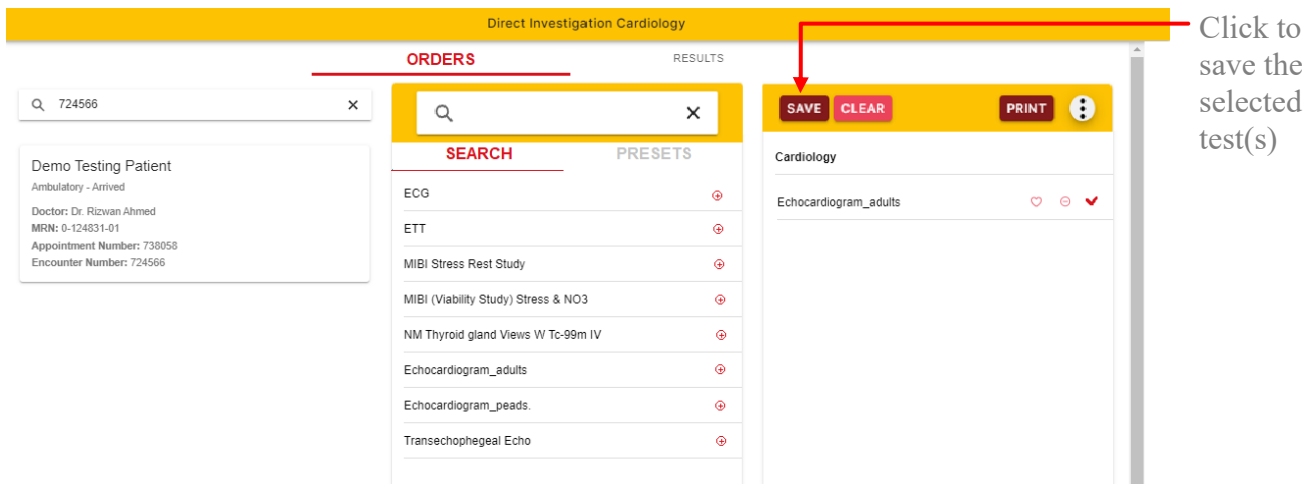


Fig. 12: save investigations

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

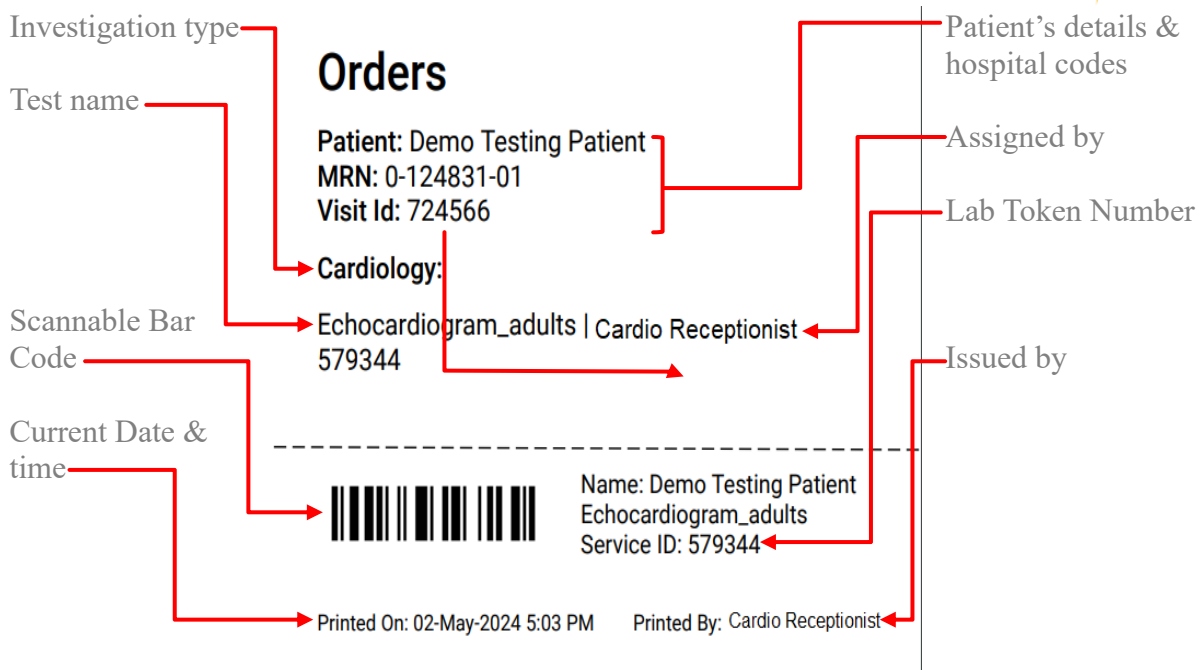


Fig. 13(a): small print (single test) (thermal token)

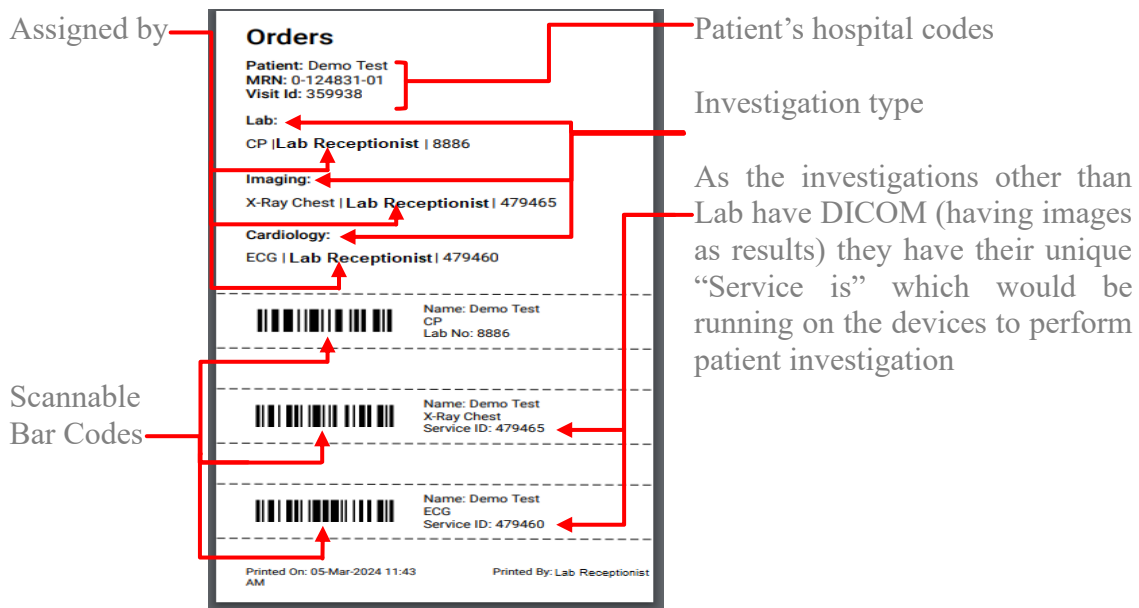


Fig. 13(b): small print (multiple test) (thermal token)

**Federal Government Polyclinic (PGMI) Islamabad  
Orders Report**

Scannable MRN and Visit ID: MRN 0-124831-01, Visit ID 359938, Token # 152

For accessing the mobile application to have reports: QR Code

Patient's Details:

- 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

Investigation Information/Details:

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

Reason(s) for having lab investigations:

**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 with lab investigations, the **RESULT** Section of the Direct Investigation Module helps in generating Reports for the selected investigations.

Select the search mode in which reports need to be searched: Search Mode dropdown (Visit ID, Lab Number, MRN, Service Request Number)

Reporting Section: RESULTS

Select the starting and ending date & time from which reports are being searched: Start Date (Feb 2, 2024 7:00 PM) and End Date (Mar 2, 2024 6:59 PM)

Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation

Fig. 14: Reporting section

Printable reports have the status of FINISHED while uncomplete reports have 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 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 track the reports.

Enter the number according to the search mode here

Performed test

Click to open dropdown

Click to view the details of the test performed

Click to print a/c to the need

Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CP	105330 / 5258	Demo Test	Finished	routine			
CP	117120 / 8828	Demo Test	Specimen Collected	routine			
RFTs (Urea, Creatinine,Uric Acid)	117121 / 8828	Demo Test	Specimen Collected	routine			
Discharge for C/S	117122 / 8828	Demo Test	Specimen Collected	routine			
Gamma GT	117123 / 8828	Demo Test	Specimen Collected	routine			
Cardiac Enzymes (CPK, LDH, SGOT,CKMB)	135068 / 4222	Demo Test	Specimen Collected	routine			

Fig. 15 (a): Search by VISIT ID

### SEARCH BY LAB NUMBER

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

Shows that the report is finalized

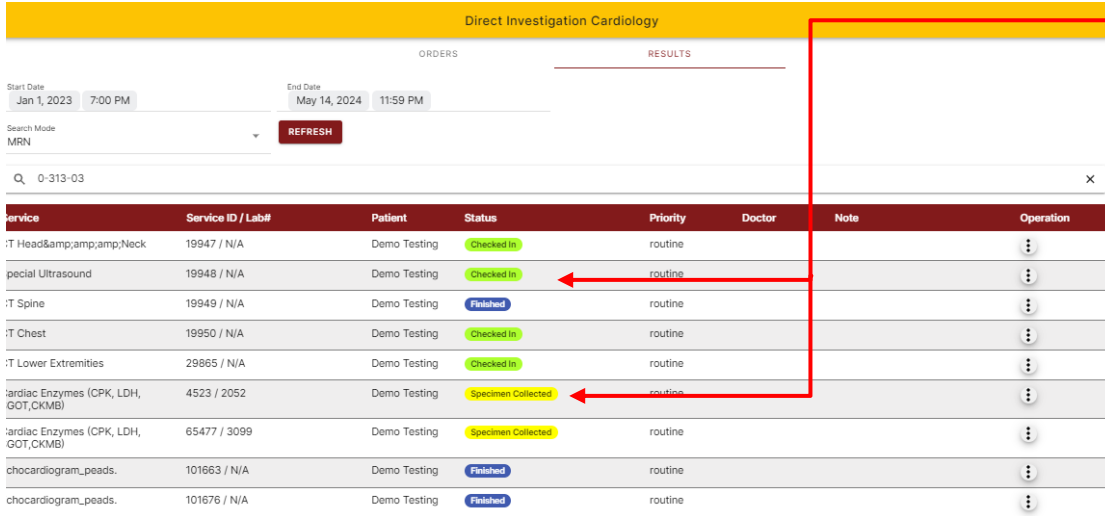
Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
LFT (T.Bili, ALK Phos, SGPT)	117370 / 8889	demo patient	Specimen Collected	routine			
RFTs (Urea, Creatinine,Uric Acid)	117371 / 8889	demo patient	Specimen Collected	routine			
Gamma GT	117372 / 8889	demo patient	Specimen Collected	routine			

Fig. 15 (b): Search by Lab Number

- SEARCH BY MRN NUMBER

The MRN is the other option if, for any reason, reports can't appear by the VISIT ID or the LAB NUMBER.

**NOTE:** Use a dash (-) or write the MRN as it is in its format i.e. 0-124831-01



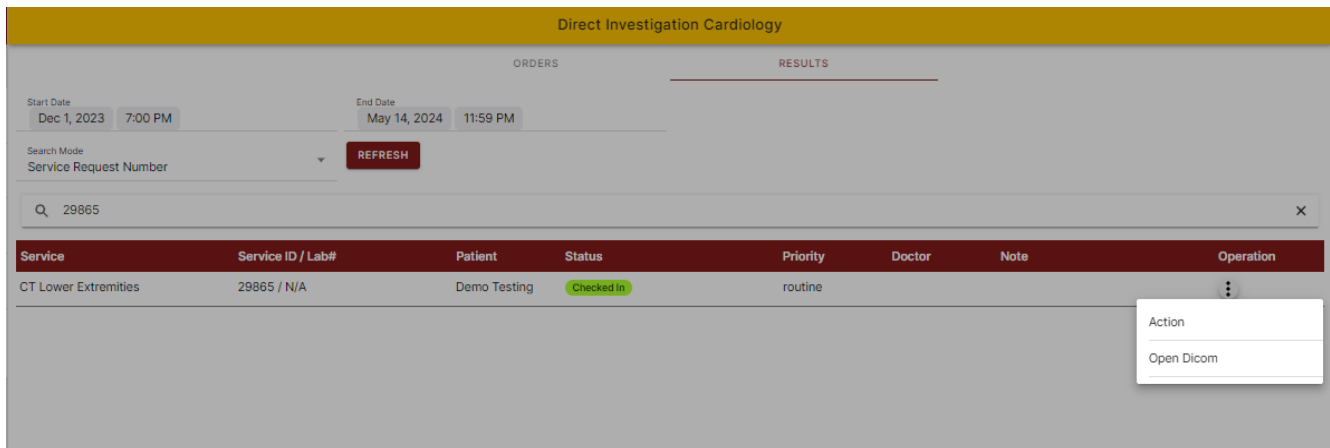
Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CT Head&amp;amp;Neck	19947 / N/A	Demo Testing	Checked In	routine			
Special Ultrasound	19948 / N/A	Demo Testing	Checked In	routine			
CT Spine	19949 / N/A	Demo Testing	Finished	routine			
CT Chest	19950 / N/A	Demo Testing	Checked In	routine			
CT Lower Extremities	29865 / N/A	Demo Testing	Checked In	routine			
Cardiac Enzymes (CPK, LDH, GOT, CKMB)	4523 / 2052	Demo Testing	Specimen Collected	routine			
Cardiac Enzymes (CPK, LDH, GOT, CKMB)	65477 / 3099	Demo Testing	Specimen Collected	routine			
chocardiogram_peads.	101663 / N/A	Demo Testing	Finished	routine			
chocardiogram_peads.	101676 / N/A	Demo Testing	Finished	routine			

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

Fig. 15 (c): Search by MRN

- SEARCH BY SERVICE REQUEST NUMBER

It is mostly needed for reports other than LAB categories like cardiology, radiology, imaging, etc. It is because 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 numbers that aren't very interlinked with any external devices.



Service	Service ID / Lab#	Patient	Status	Priority	Doctor	Note	Operation
CT Lower Extremities	29865 / N/A	Demo Testing	Checked In	routine			<ul style="list-style-type: none"> <li>Action</li> <li>Open Dicom</li> </ul>

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 a sample, time of completing/performing the sample, sample test performed, and reports signed by with the performer details.

**Report Activity**

<b>Requested On</b> Jul 20, 2023, 10:32:54 AM	<b>Completed On</b> Jul 21, 2023, 10:26:58 AM
<b>Completed By</b> Dr. demo provider	<b>Signed On</b> Jul 21, 2023, 10:28:07 AM

**Save Trail**

**Cardio Receptionist**  
Time: Jul 21, 2023, 10:26:58 AM  
Mobile: 03 [REDACTED]

CANCEL

Fig. 16: Show Activity

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

**Federal Government Polyclinic (PGMI) Islamabad**  
**Lab Report**

MRN  
 0 - 124831 - 01

Visit ID  
 724566

Lab Number : 1432	Entry Date : 08-Mar-2024 2:08 PM	Department : Medical Unit-1(B-140)
MRN : 0-124831-01	Department : (Task)	Father Name
Patient Name : Demo Test	Father/Husband Name	Age : 39 years, 8 months, 7 days
Birth Date : 1984-07-01	Age	Gender : Male
Weight : N/A	Gender	

Test	Results	Reference Range	Units
<b>Haematology</b>			
<b>CP</b>			
<b>Blood Complete Picture</b>			
WBC Count	6	4 to 10	10 <sup>3</sup> /uL
RBC Count	4.0	3.8 to 4.8	10 <sup>6</sup> /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 <sup>3</sup> /uL
<b>Differential Count</b>			
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

Disclaimer: This report is based on the results of our laboratory experiments and our interpretation of those results. While we took every effort to ensure the accuracy of our data, there may be limitations or errors that could have affected the results. Furthermore, our study was conducted under specific conditions that may not be applicable to other situations or practitioners. Therefore, any conclusions drawn from this report should be considered in light of these limitations. Finally, we certify that this report is the result of our own work and that any inaccuracies noted have been properly cited.

Lab Technician

Fig. 17: Reporting Print Preview

## TIBBIT SETTINGS



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

1. Change Password
2. Clear Cache



Fig. 18: Settings

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

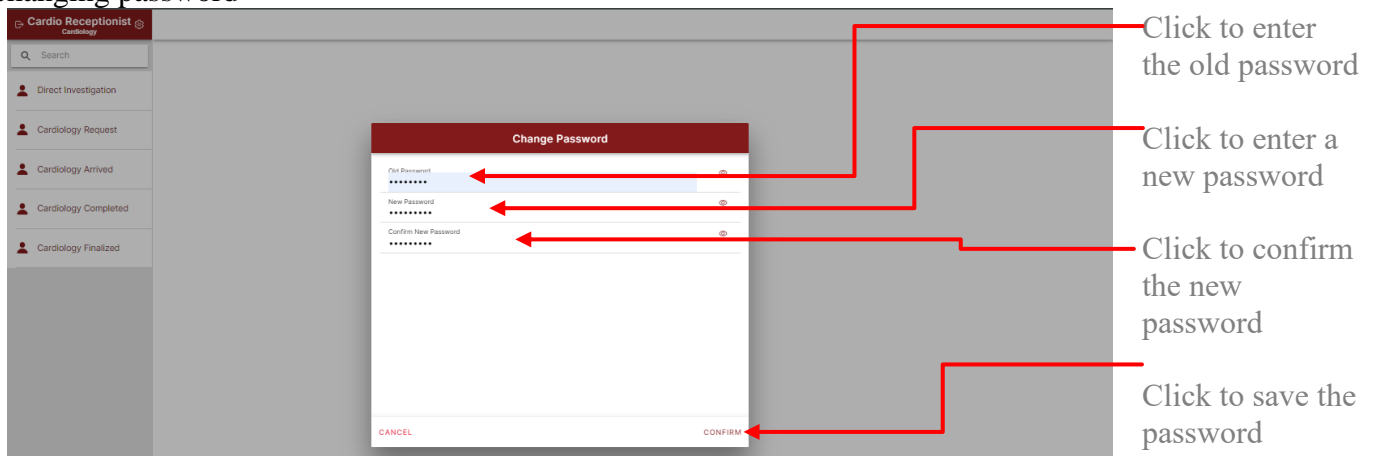


Fig. 19 (a): Change Password

If the user faced any instability regarding using the software, then the other option than the change password is effective in this way. Clicking "**CLEAR CACHE**" will lead to the alert box indicating the **CONFIRM** button to clear it.

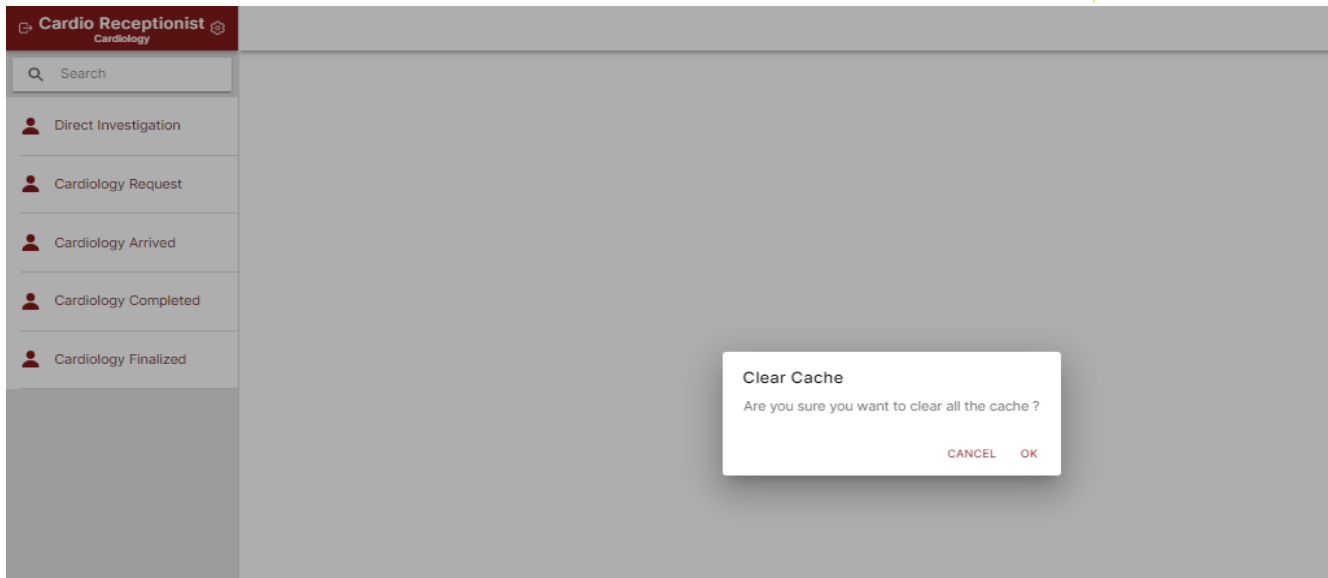


Fig. 19 (b): Clear Cache

## LOGOUT FROM THE TIBBIT SOFTWARE

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

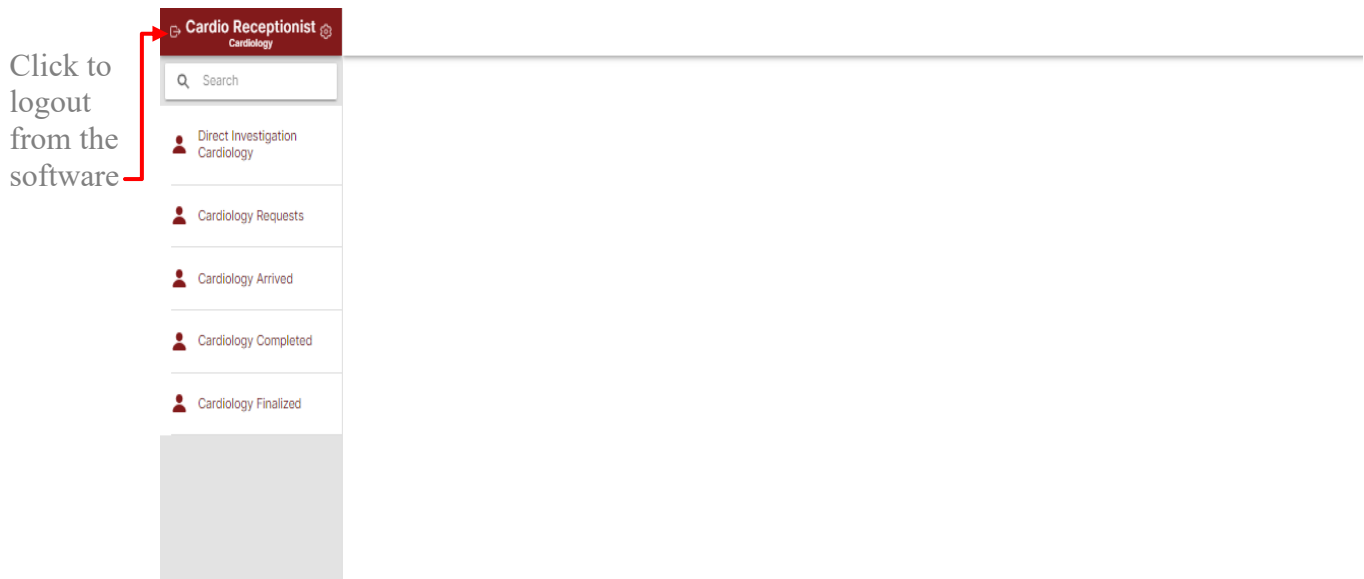


Fig. 20: Logout

### Cardiology Request

In the Cardiology Request module, receptionists can view patient data with service IDs and schedule tests based on availability.





**Steps:**

1. View the patient's data with the service ID.
2. Schedule tests or check availability.
3. Save the data and proceed.

**6. Cardiology Arrived**

Once tests are scheduled or availability is checked, data moves to the Cardiology Arrived section. Here, receptionists can choose between the ACTION function (view test templates) or view DICOM (view test results in imaging form).

**Steps:**

1. Choose between the ACTION function or view DICOM.
2. View selected test templates or test results in imaging form.
3. Save templates and test results.

**7. Cardiology Completed**

In the Cardiology Completed module, authorized receptionists sign test templates and can print test reports.

**Steps:**

1. Authorize and sign test templates.
2. Print test reports.

**8. Cardiology Finalized**

The Cardiology Finalized section contains all reports with finalized status. Here, users can view and print reports, including previous ones.