

A decorative graphic at the top of the page consisting of a network of light blue circles of various sizes connected by thin lines, resembling a molecular structure or a data network.

# AccuLab

Laboratory Information System

# AL FARIS (Optimiza)

01 First publicly-listed IT company in Jordan (2005) (ASE:CEBC)

02 Over 350 professionals with an intellectual capital spanning diverse industries with processes, and methodologies to support complex projects

03 Vision is to become leading Regional Technology Systems Integration company in the Middle East and North Africa (MENA)

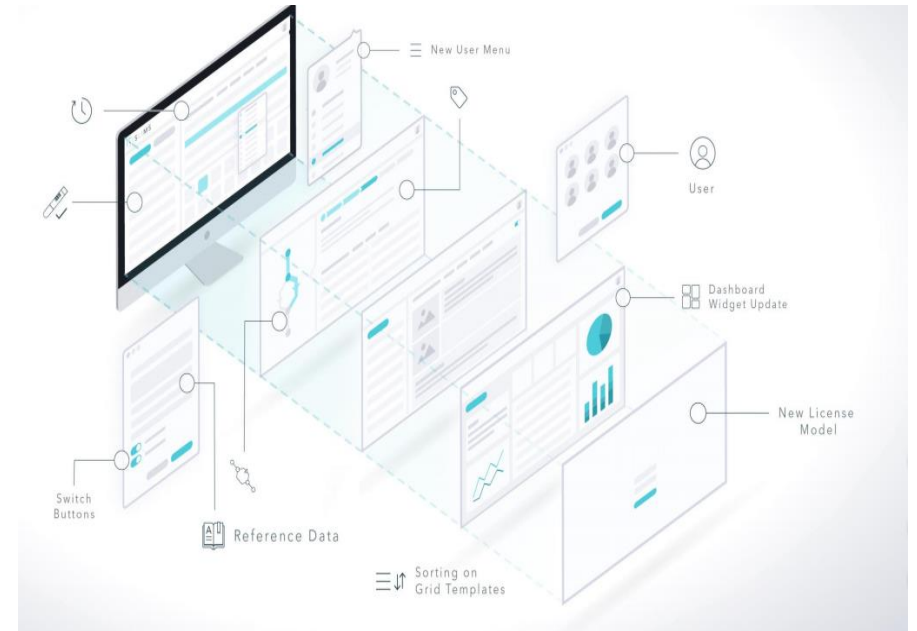
04 35 years+ of history & experience and hundreds of successful projects delivered

05 Our philosophy is based on customer service – we provide a highly customer centric to ensure that we meet and exceed your expectations throughout the whole project

06 Major shareholders include: CCC, Public Social Security Fund (Jordan), Arab Bank, Kawar Group.

# AccuLab LIS

AccuLab is a Laboratory Information System platform designed to support and enhance the operations of modern patient laboratories. It helps labs transform into a digital environment by streamlining patient centric operations with the goal of improving service, maintain quality and save both money and time using leading edge technologies such as IoMT



# AccuLab LIS

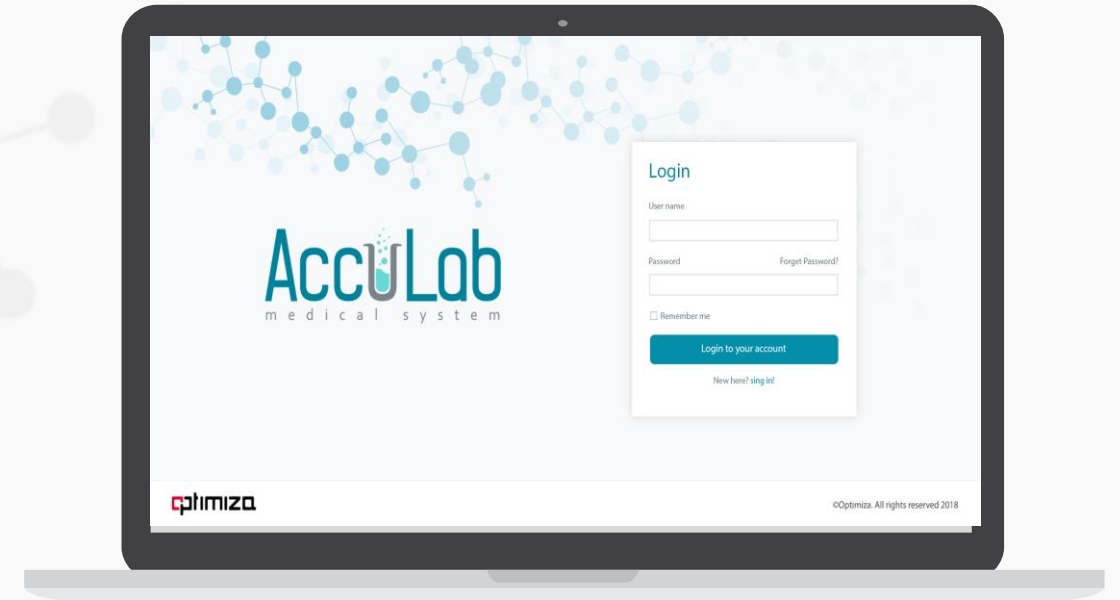
AccuLab is a cloud-based software-as-a-service solution that meets different aspects of Laboratory Informatics

AccuLab includes the necessary modules to process laboratory samples and produce timely results. The core architecture is designed to offer streamlined process that is efficient and effective

Utilizing native components, AccuLab offers higher levels of integration with laboratory analyzers and 3<sup>rd</sup> party systems

AccuLab serves small labs, lab chains, central/regional labs, medical centers, hospitals and other healthcare institutions

AccuLab can be deployed on-premise if needed.



### Global Access



Can be securely accessed anywhere and on any device type by clients, patients and laboratory staff

### Lower Capital Expenditure

With AccuLab cloud, the total cost of ownership is significantly lower compared to other LIS systems by reducing the need to employ your own IT staff or purchase IT infrastructure



### International Standards

Mayo Clinics, LOINC, ICD, CPT, HIPPA

Helps you to obtain: CAP, ISO, ILAC & HCAC Accreditation

### Integration



AccuLab is integrated with a wide variety of laboratory devices and the list is constantly growing using international codes: HL7, ASTM, LIS2



### Open-Source Technology

Cost-effectiveness, Speed, Flexibility and Agility, Solid Information Security



# AccuLab Connects All your Branches

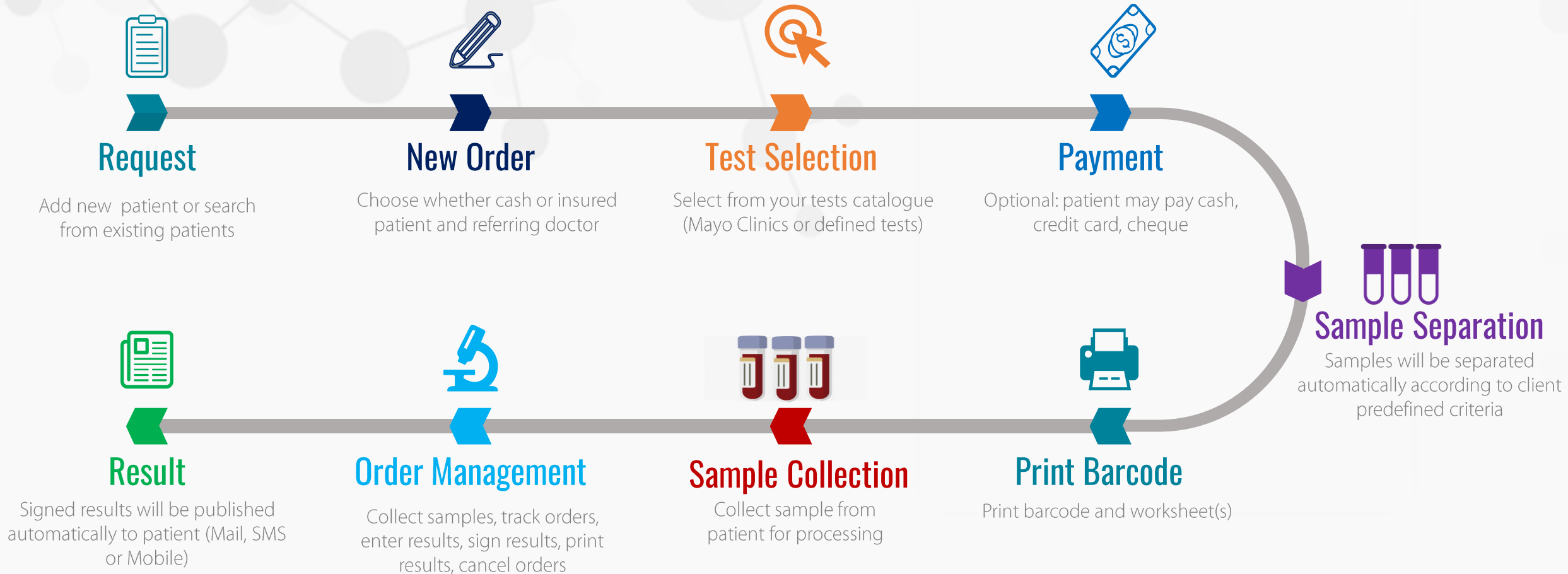
The main challenge with managing multiple branches is to have a 360-degree view of your business at any time

AccuLab allows you to view all patient orders and follow up on billing and insurance claims while the claims process can be handled per branch or for the whole lab



# AccuLab Cycle | Request to Result (R2R)

Chemistry, Hematology, Microbiology, Histopathology, Immunology/Serology, etc.



# AccuLab Core Modules



## Patient Management

Fast onboarding, maintain patient data, review test results, medical history, monetary information.



## Test Catalog

Test Catalog data, Normal Ranges, Panels, Price Lists & Packages Management



## Order, Sample & Result Management

Test Order Management & Test Selection Sample Separation, Bar-Coding and Sample Collection. Results Management, Historical Data, Results Delivery & Notifications, Test Referral



## Insurance

Define insurance companies, define plans, claim & Settlement process



## Accounting

Billing and Payment Management



## Security

User management, roles management, group management



## Dashboard

Enterprise Reporting & Dashboard



## Patient Portal & Mobile App

Results Notifications, Historical Data, Results Visual indicators



# Leading Features

## Audit Trail



AccuLab has full audit trails built into the system. This allows you to know who did what, when they did it, and more. The audit records can be viewed by time frame (today, yesterday, within a week, within a month) or by user



## Patient Record

Patient Registration & Record Management: demographics, medical indicators, notes, smart search, name transliteration, fingerprint identification, reading National Smart Card for fast on-boarding



## Label Printers

AccuLab supports:  
Zebra Label Printers  
Brady Label Printers  
PrintMate AS Cassette Printer  
CAB Printer

## Global and Advanced Search

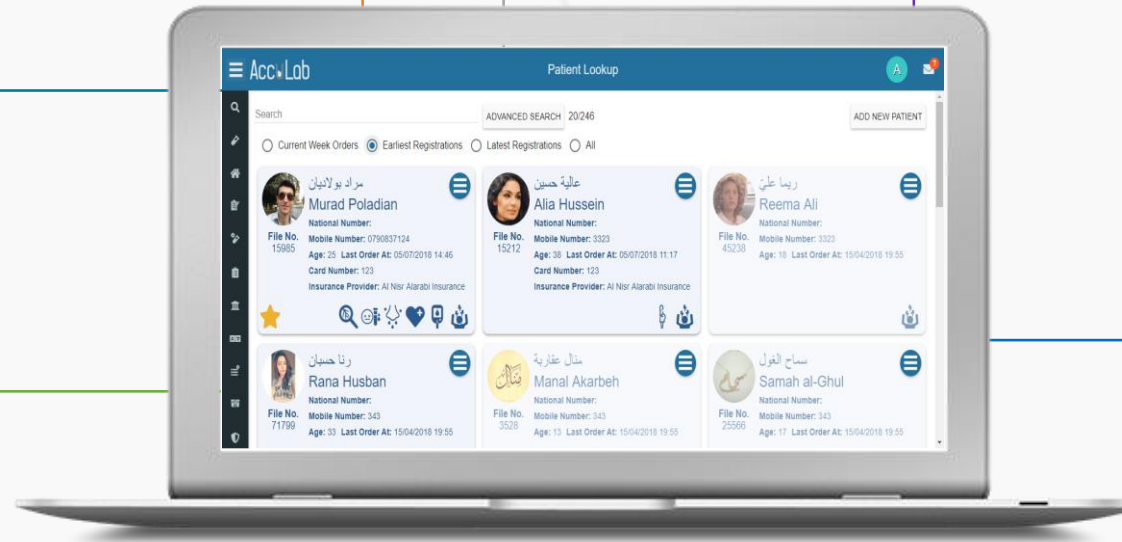


A complete filter mechanism enables you to search and sort your data according to any parameter

## Platform



Multi-Tenant, Multi-Branch, Multi-Lingual, Cloud & On-Premise, Responsive



## Referral

Tests may be received /sent from other branches, between other lab network or sent abroad. Each branch/lab balance will be updated accordingly.

Patient electronic onboarding and lookup reduces the time-to-service your patients, improves patient experience and maintains patient data quality.

### ID Smartcard Reader



- Easy and quick to signup
- Retrieve accurate official data: Name, DOB, National ID, Gender, photo, Address, Phone Number, etc.
- Increase customer intimacy



### Fingerprint Reader

- Enroll your patients with biometric fingerprint identification
- Serve customers immediately without relying on ID or Insurance cards
- Quick patient record lookup

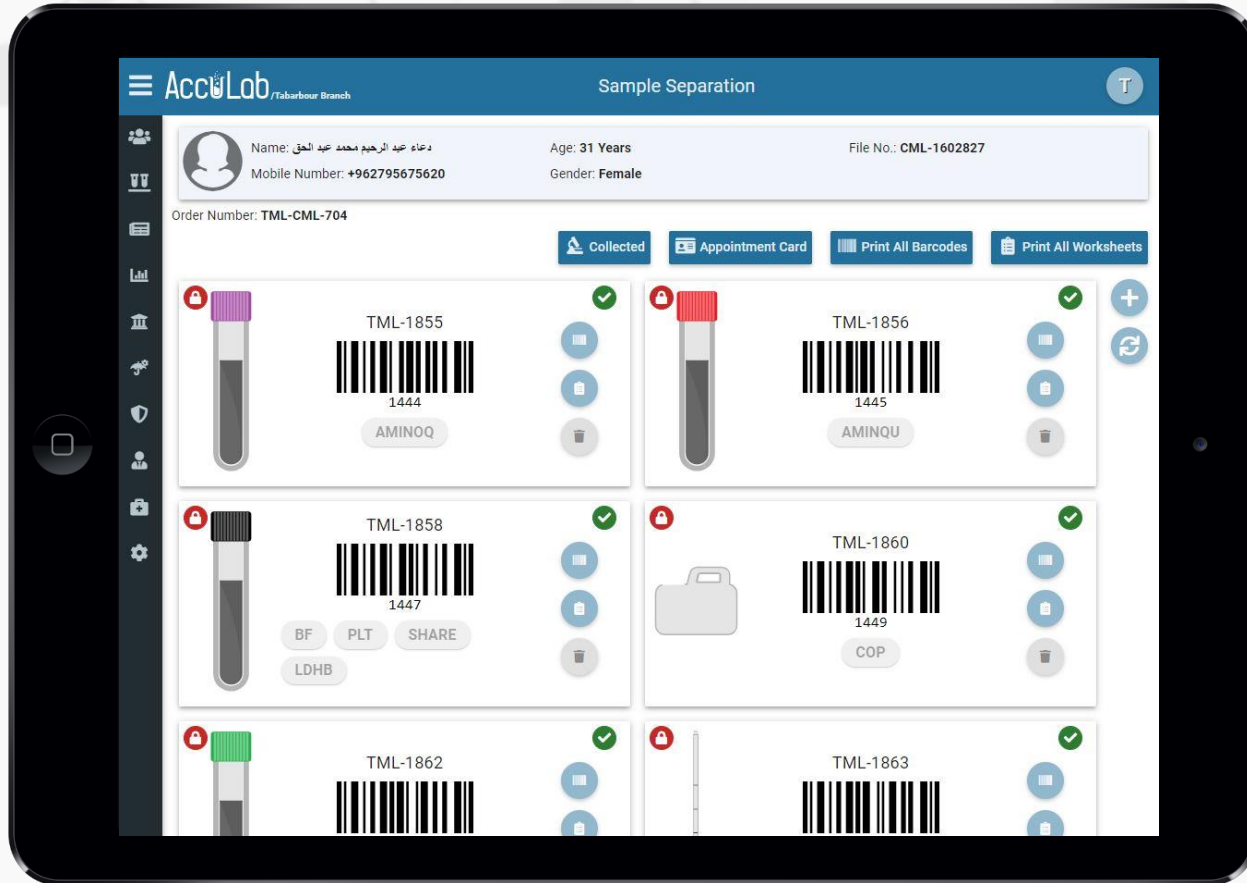


### Customer Interaction

- Appointment Card
- SMS Messages
- Emails
- Mobile App Notifications
- WhatsApp Messages

# Sample Separation

Easily and Quickly Way to Mänge Your Samples



AccuLab offers a user-friendly UI with a visual representation of your samples.

Once samples are generated\* you can rearrange by dragging and dropping tests between samples. You can also add or delete samples.

\* Samples are separated according to predefined setup configured by lab system admin based on different separation algorithms or methods

# Test Catalogue

AccuLab Test Catalogue contains detailed data necessary to ensure accurate and reliable test results



## Test Information

Access information about specimen type, sample volumes, normal ranges and other information about a specific test



## Units of Measure

Reference a listing of units of measure and ability to add/modify /delete



## Templates

Ability to link sections to predefined result report templates



## CPT Code

View and search by CPT code and test classification



## Panels

Group tests in panels.



## Calculated Tests

Ability to define results based on a calculation of other results

# Test Results

AccuLab provides professional test result templates for various types of tests

AccuLab

## Lab Results

Customer Name : **ولاء مصطفى** Gender : Female  
 File No. : **1706-1700384** Age : 34 Years  
 Order No. : **TML-CML-1** Order Date : 30/06/2019  
 Referred By : **رجائي نصر الدين** Order Time : 01:20 PM

### Prenatal Maternal Triple Screen

Date Of Birth : 1 Gestational Age(weeks) : 10.0 Weeks  
 Race : **Caucasoid(White)** Weight : 10.0 Kg  
 L.M.P : 1 First screen/repeat : Repeat  
 Multiple of Pregnancies : 1 Diabetic : No  
 Alpha-Fetoprotein : 5.0 ng/ml  
 Free-Estradiol, serum level : 1.0 ug/L  
 B-Chorionic Gonadotropin, serum level : 10.0 U/L  
 Risk of Maternal age alone : 1:20  
 High Risk Cut-off Ratio : 1:256  
 Down's Syndrome risk (T-21) : 2:30  
 High risk ratio : 1:256  
 Trisomy 18 risk : 2:30  
 High Risk Cut-off Ratio : 1:100  
 Neural Tube defect risk : 0

Printed By : tml-Admin tml-Admin Printed At : 03/07/2019 12:18 PM

AccuLab  
 LABORATORY INFORMATION SYSTEM

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 P.O. Box: 5229888  
 Sitra Street Sitra Towers, Complex No.172 - 1st Floor  
 www.acculab.net

Optimiza | AccuLab

Customer Name : **زين عبد الله** Gender : Female  
 File No. : **CML-1700384** Age : 59 Years  
 Order No. : **TML-CML-2** Order Date : 27/06/2019  
 Referred By : **Self Request** Order Time : 09:49 PM

Test Name	SI Units	Conventional Units
Fasting Blood Sugar	0.06 mmol/L	1 mg/dL
Normal Range	Normal 3.92 - 5.54	70 - 99
	Pre-diabetic 5.60 - 7.00	100 - 125
	Diabetic >7.00	>125
Previous Result	13/11/2017 105 mg/dL	03/06/2017 104 mg/dL
Fasting	Yes	
Glycosylated Haemoglobin (HbA1c), blood	1.0 %	1 %
Normal Range	Normal 4.80 - 5.60	4.80 - 5.60
	Pre-Diabetic 5.70 - 6.40	5.70 - 6.40
	Diabetic 6.50 - 6.90	6.50 - 6.90
	Diabetic poor control >=7.00	>=7.00
Previous Result	12/11/2018 6.13 %	13/11/2017 6.2 %
Cholesterol total , serum	0.03 mmol/L	1 mg/dl
Normal Range	Desirable <5.20	<200
	Borderline 5.20 - 6.24	200 - 240
	CVD High risk >6.24	>240
Previous Result	12/11/2018 168 mg/dl	13/11/2017 166 mg/dl
High Density Lipoprotein.HDL	0.03 mmol/L	1 mg/dL
Normal Range	Desirable >1.55	>60
	Borderline 1.04 - 1.55	40 - 60
	Low <1.04	<40
Previous Result	12/11/2018 46 mg/dL	

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AccuLab

## Lab Results

Customer Name : **مرح هاشم** Gender : Female  
 File No. : **CML-1603274** Age : 27 Years  
 Order No. : **TML-CML-49** Order Date : 02/07/2019  
 Referred By : **الام لافان** Order Time : 05:05 PM

### Haematology

			Normal Range (Age and Gender Related)
Hemoglobin	11.8 g/dL		11.6 - 15.0 g/dL
Hematocrit	36.1 %		35.5 - 44.9 %
Erythrocytes	4.28 X 10 <sup>12</sup> /L		3.92 - 5.13 X 10 <sup>12</sup> /L
M.C.V	84.0 fL		78.2 - 97.9 fL
M.C.H	28.0 pg		26.0 - 34.0 pg
M.C.H.C	32.7 g/dL		32.0 - 36.0 g/dL
RDW-CV	14.3 %		12.2 - 16.1 %
Leucocytes	6.93 X 10 <sup>9</sup> /L		3.40 - 9.60 X 10 <sup>9</sup> /L

### Differential

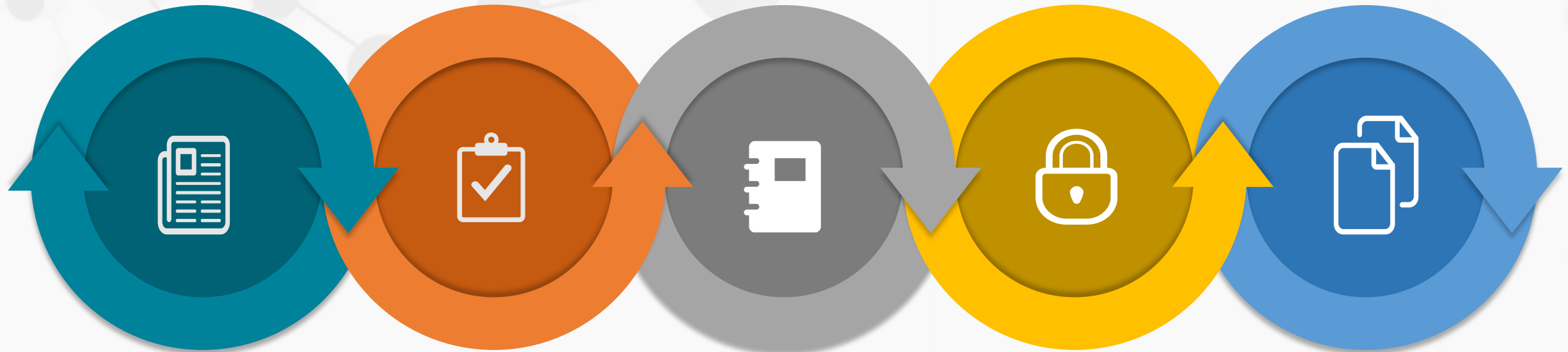
Neutrophils	66 %	4.574 X 10 <sup>9</sup> /L	1.560 - 6.450 X 10 <sup>9</sup> /L
Lymphocytes	27 %	1.871 X 10 <sup>9</sup> /L	0.950 - 3.070 X 10 <sup>9</sup> /L
Monocytes	6 %	0.416 X 10 <sup>9</sup> /L	0.260 - 0.810 X 10 <sup>9</sup> /L
Eosinophils	1 %	0.069 X 10 <sup>9</sup> /L	0.030 - 0.480 X 10 <sup>9</sup> /L
Basophils	0 %	0.0 X 10 <sup>9</sup> /L	0.010 - 0.080 X 10 <sup>9</sup> /L
Others	0 %	0.0 X 10 <sup>9</sup> /L	X 10 <sup>9</sup> /L
Platelets Count	281.0 X 10 <sup>9</sup> /L		157 - 371 X 10 <sup>9</sup> /L
Platelet Distribution Width	13.9 %		10.0 - 16.9 %
Mean Platelet Volume	10.6 fL		9.3 - 12.2 fL

Peripheral Blood Film  
 MAINLY NORMOCHROMIC NORMOCYTIC RED BLOOD CELLS.  
 LEUCOCYTES & PLATELETS APPEAR NORMAL.

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Printed At : 03/07/2019 12:29 PM

# Insurance Claims Management



## Pricelists & Plans

Define multiple pricelists and plans "supports simple and complex plans"

## Authorization

Prior authorization "pre-authorization" before obtaining service

## ICD

Add ICDs to each order and ability to integrate with approval portals

## Security

High level of security protects confidential information ensuring privacy and grant access only to authorized users

## Reporting

Detailed and summarized claims, rejections, statistics, balances, etc.

# Financial Invoices & Reports

AccuLab generates plenty of professional reports: invoices, statements, operational, etc.

**optimiza** Customer Invoice

Invoice # : TML-CML-8  
Order Date : 28/06/2019  
5,000 JOD

Customer Name : عائشة حسن Gender : Female  
File No. : CML-1600208 Age : 5 Years  
Order No. : TML-CML-8 Order Date/Time : 28/06/2019 03:16 PM  
Referred By : Self Request Printing Date/Time : 03/07/2019 02:43 PM

#	Description	Amount (JOD)
1	Partial Thromboplastin Time, PTT	5.000
Subtotal:		5.000 JOD
Discount:		0.000 JOD
Amount Due:		5.000 JOD
Amount Paid:		5.000 JOD
Remaining Balance:		0.000 JOD

Payment(s):

#	Amount	Currency	Type	Date	Received By	Notes
1	2.000	JOD	Cash	03/07/2019	tml-Admin	
2	3.000	JOD	Credit Card	03/07/2019	tml-Admin	

User : tml-Admin  
Date : 03/07/2019

**Daily Income Report**  
**Tabarbour Branch**  
From: 29/06/2019 To: 04/07/2019

#	Order No.	Patient Name	Order Date	Discount	Cash/Visa	Credit	Not Paid
1	TML-CML-9	ولاء محمد خليل	29/06/2019	37.002	320.000		
2	TML-CML-10	محمد خليل	30/06/2019				5.000
3	TML-CML-11	خليل خليل	30/06/2019				50.000

Totals (JOD): 320.000 0.000 55.000  
Total Discount (JOD) : 37.002 9.0%

Grand Total (JOD) : 375.000

**optimiza** المطالبة ذمم شهرية الفرع : فرع طبربور

03/07/2019 - 01/01/2019: فترة المطالبة All Insurances : مطالبات شركة التأمين

#	Company Name	Full Charge	Co-Payment	Contact Discount	Claimed Net Amount
1	Housing Bank : Housing Bank	6.000	0.000	1.200	4.800
Totals:		6.000	0.000	1.200	4.800



# Sample Tracking

AccuLab combines powerful specimen tracking and flexible searching



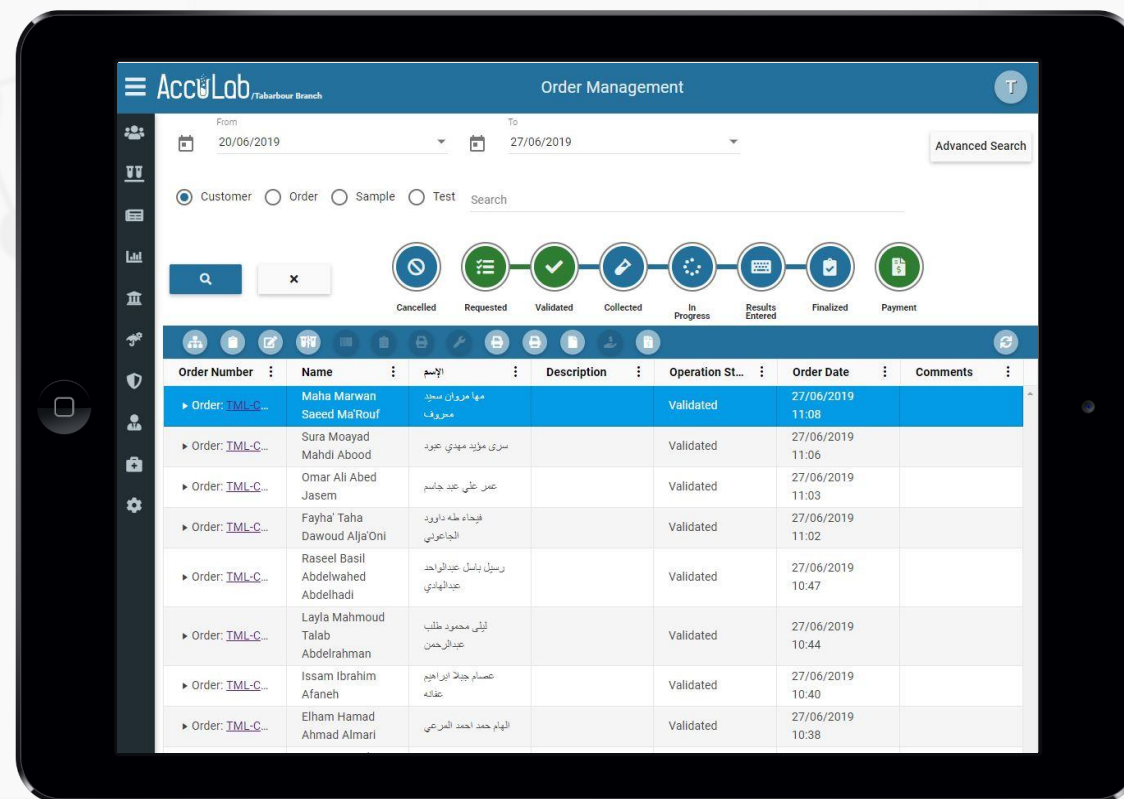
Sample receipt and ability to add or remove test(s)



Sample barcode labeling with standards-based layout



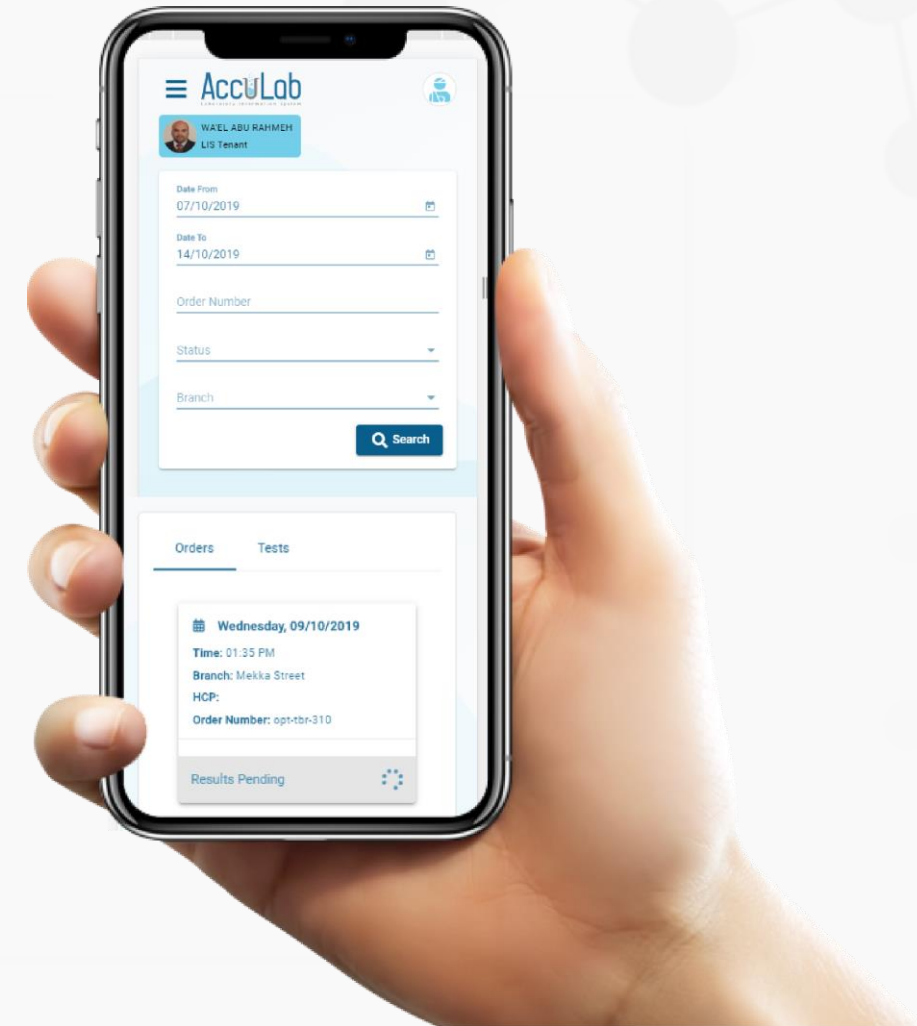
Global and advanced search

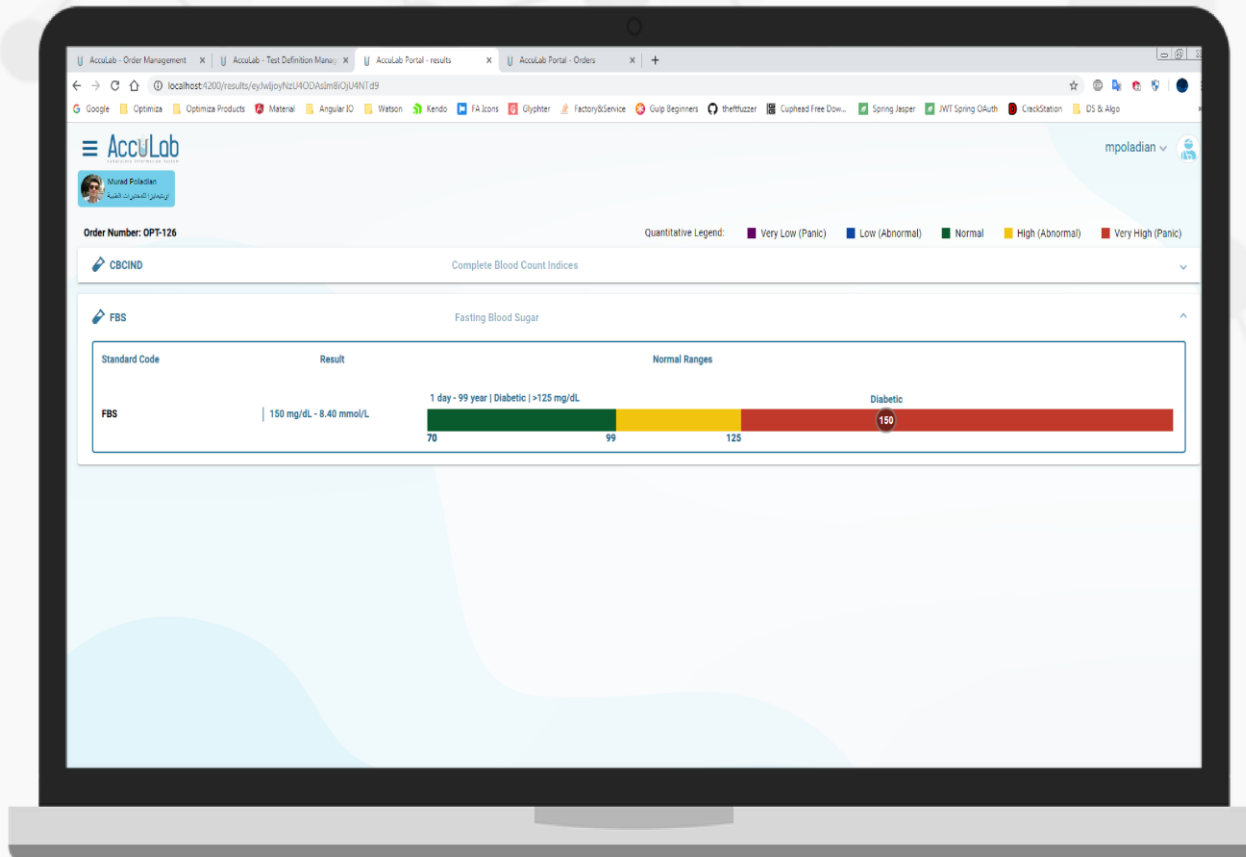




Optimiza is making AccuLab more valuable with an omni-channel portal and mobile application that is quick and easy to use.

AccuLab portal and mobile increases patient/ customer intimacy and retention by allowing patients to track their health while facilitating better communication between patients, your lab and their healthcare providers.





A fast, intuitive patient portal with features designed to increase collaboration, engagement, loyalty & satisfaction for both patients and healthcare providers

## Features



Easy & Secure Sign-Up



Results Visualization / charts



Historical Results Comparison



Family Members Access



Healthcare Providers Access



Doctor-Patient Chat



Appointments



Notifications

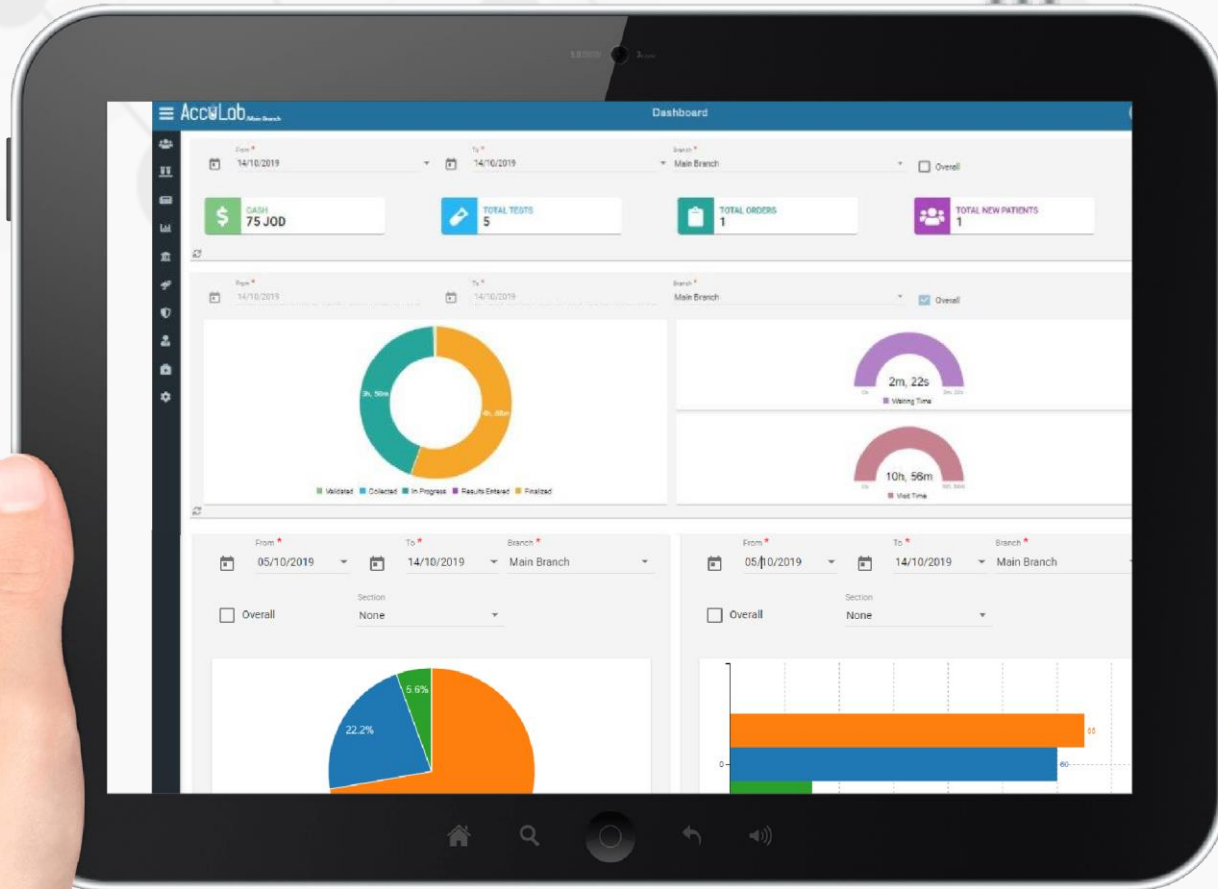


Visit & Doctor Ratings



Monetary Information

# Dashboard | Get Insight From Your Data



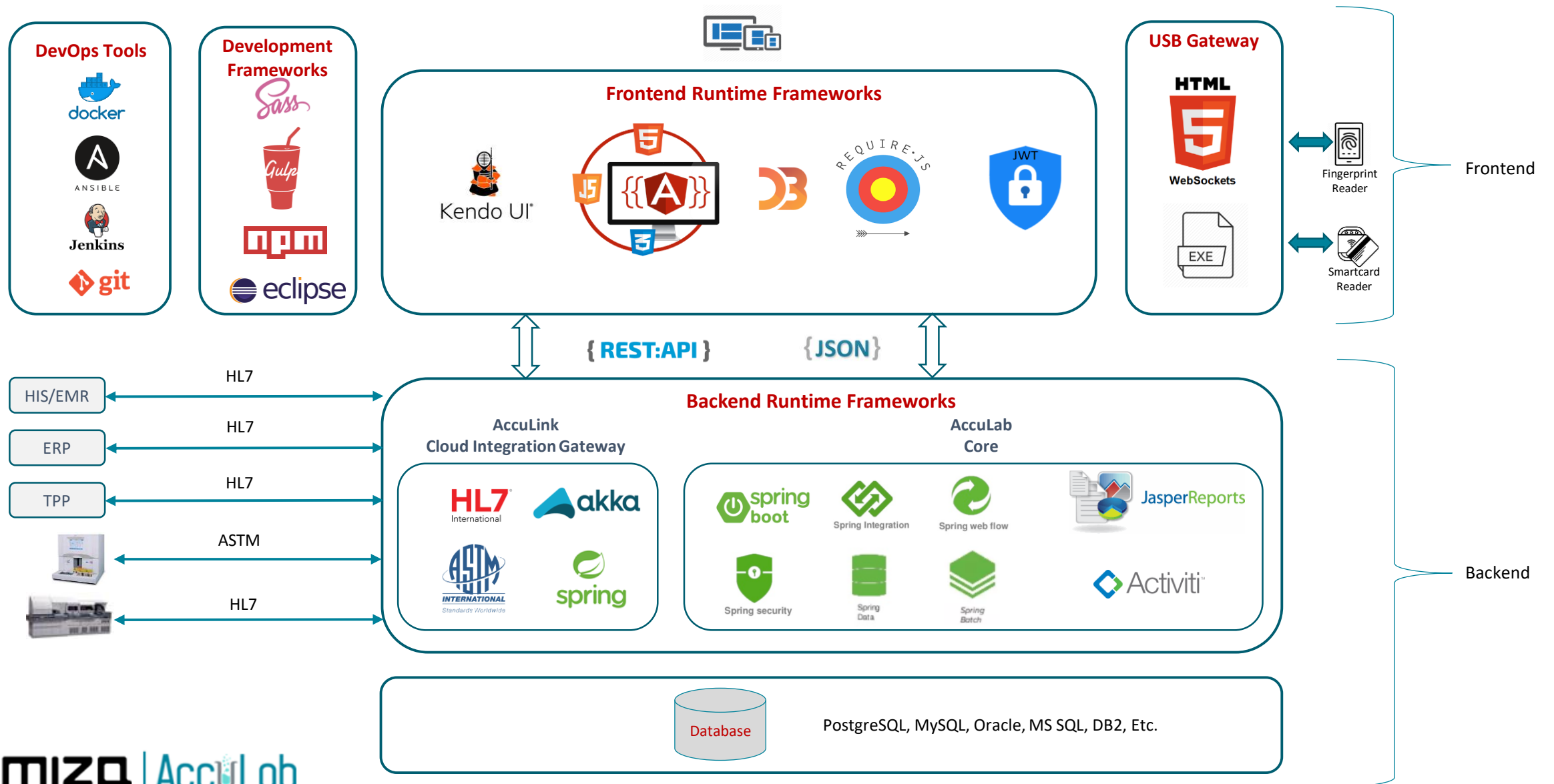
AccuLab brings all your data together in one place. Merge data together to unlock valuable insights, see trends at a glance and gain a better understanding of your business results. Capture insights from your KPIs and metrics in a way that makes sense for your business

# Third Party Integration | Flexible Integration with 3<sup>rd</sup> Parties with HL7

We at Optimiza differ from other third-party API integration services with a two decades of experience in the industry, we can help you avoid most common integration implementation pitfalls. We will ensure that new or custom integration projects are appropriately assessed in terms of scope, complexity and cost and that the implementation is smooth and painless



# Technology Landscape



# Implementation Methodology

An agile implementation methodology is fine-tuned for fast track delivery.



Agile implementation methodology focused on getting a lab/branch up and running usually within a month (depends on the readiness of the lab).



Capture configuration requirements and integration requirements to quickly on-board customers. Software customizations are not allowed.



Deliver change management guidance and training that focuses on train-the-trainer concept.



Provision of spreadsheet tools to simplify data collection and bulk loading. Self data loading is possible for savvy customers.



Customized services for data migration of test catalogs and patients' historical data.



Effective configuration and close follow-up ensures effective use of AccuLab features.

# Roadmap



# Reference List



15 Branches

Dr. Hamzah Abu Shikha

[hamzah@megalabs.org](mailto:hamzah@megalabs.org)

00962 795 227 261



5 Branches

Dr. Razan Abdulhadi

[cml@teamlab-medical.com](mailto:cml@teamlab-medical.com)

00962 777 390 339





# AccuLink

Middleware Solution

# AccuLink Middleware | Step to the Next Level

To succeed, you need more than systems that work in harmony. You need integration that fully utilizes your devices with AccuLab with great efficiency and accuracy.

Take integration to the next level with AccuLink middleware solution on-premise or in the cloud.

AccuLink is a highly flexible and scalable series of innovative technologies designed to help you integrate and manage all your laboratory devices. It provides comprehensive monitoring tools which provide full insight about your devices across the different branches.



### Scalability & Flexibility

From basic device interface to the complete management of technical facilities, AccuLink can adjust to all kinds of requirements and configurations

### One Centralized Solution

Increase efficiency by centralizing information and tools in a single software package



### New Features, New Technologies

Optimize your laboratory production and benefit from the latest functional and technological innovations, while improving your existing LIS interfaces and communications

### Return on Investment

AccuLink enhances the laboratory efficiency while reducing production costs and at a fraction of the cost of a new LIS or system upgrade

# IoMT: Internet of Medical Things

IoMT connect distributed lab devices to AccuLab through a centralized middleware network “AccuLink” enabling you to manage your samples from the Cloud or On-Premise



## Standard

Using international communication protocols and messaging structure: HL7, ASTM, LIS2



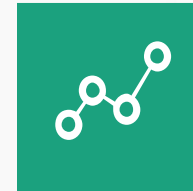
## Experience

Optimiza has the experience and expertise to define, develop and deploy solutions in IoMT that meet our clients' needs and realize new services and sustainable business models



## Efficiency

Which lower costs, save time and improve accuracy



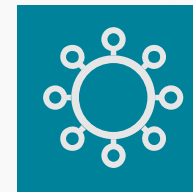
## Mechanism

Data flow will be transferred without any delays and errors



## Security

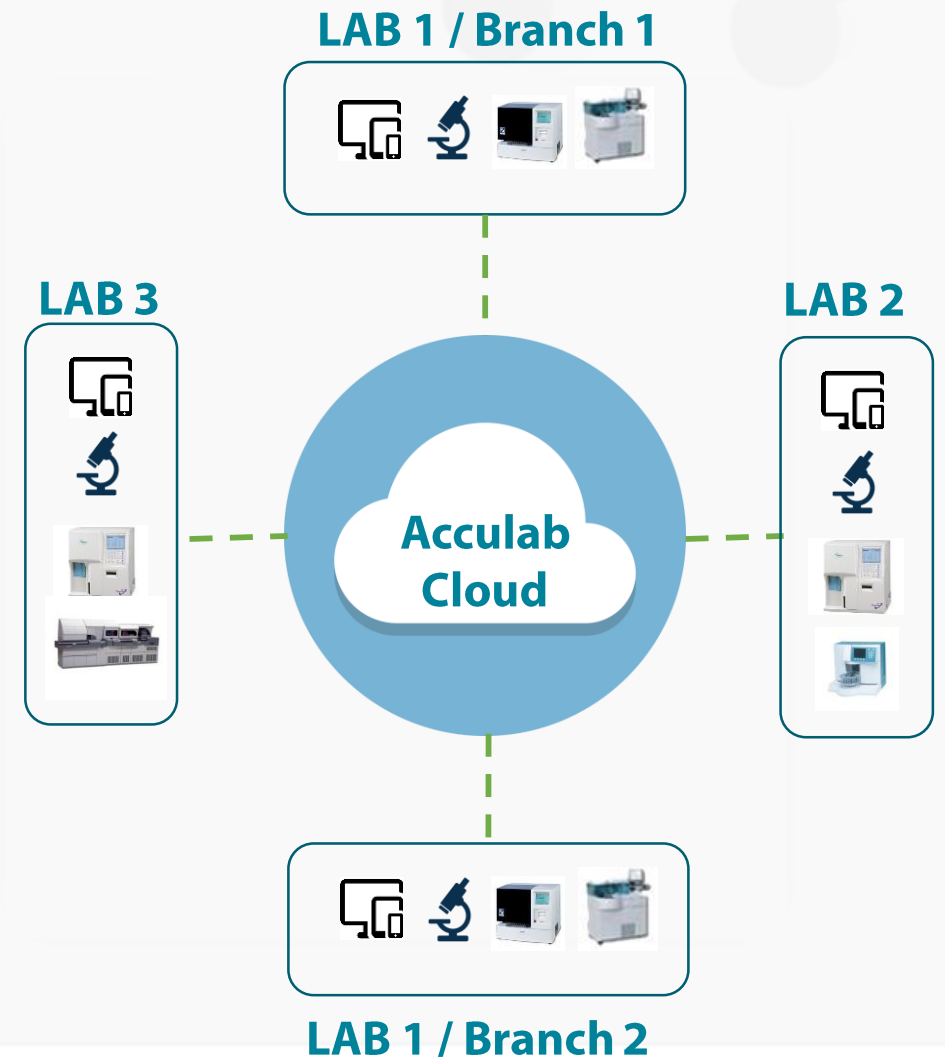
HIPAA-compliant data security



## Flexibility

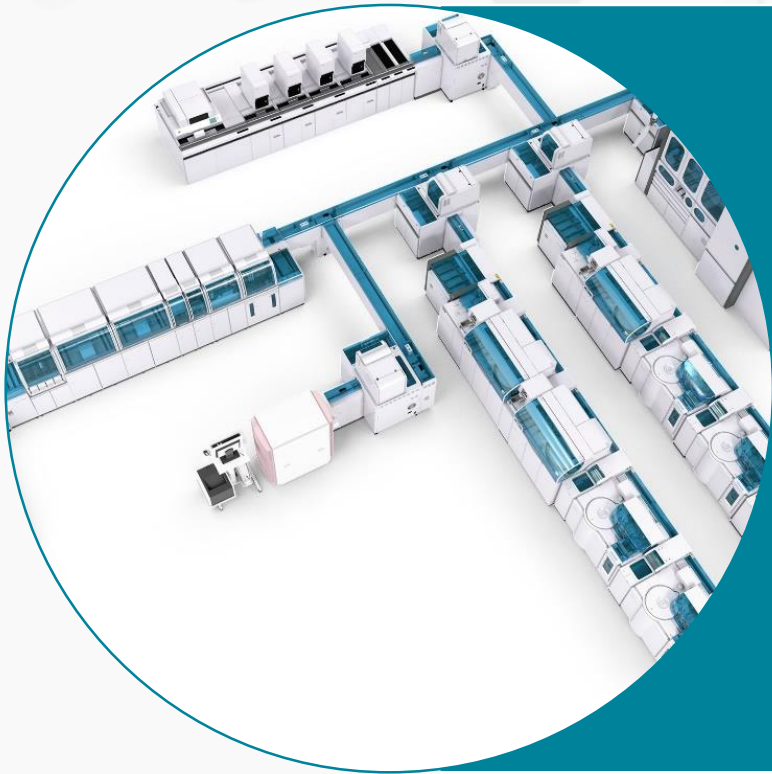
Ability to manage virtually any number of devices and software

- Multi Tenant
- Multi-Branch support
- No in-branch software required
- Device direct cloud communication (IoT Devices Integration)
- Serial Port Analyzers Supported:
  - Serial to Network Adapter required, or
  - Serial to Network PC based agent
- Plan to use on-board micro-controllers as the on-premise IOT communication gateway



# Devices Integration

AccuLab is integrated with a wide variety of laboratory devices, and the list is constantly growing. If an important component of your lab is not already listed here, our middleware AccuLink can configure it for you in a few simple steps.



- Bechman Coulter x800
- Siemens Advia Centaur XP
- Roch Elecsys 2010
- Roche Cobas e411
- Abbott Architect i2000sr
- Roche Cobas 6000
- Siemens Immulite 2000
- Roche Cobas c111
- Sysmex XP 300
- Sysmex- CS 2000i
- Siemens Advia Centaur XPT
- Siemens Clinitek Advantus
- Roche Cobas 6000
- Sysmex KX 21
- Abbott Architect ci4100
- Siemens Immulite 2000 XPI
- Grifols
- Bechman Coulter Unicel 800
- D10
- Mindray BS 200
- Sysmex Suite
- Sysmex XS 500 i

# AccuLab & AccuLink

Is the perfect companion for your Lab

<https://www.acculab.me/>

<https://www.youtube.com/watch?v=dKUcAKS4dP4&t=18s>

<https://www.youtube.com/watch?v=WqYvKbrwfyE&t=11s>



# Thank You

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