

Enzim2016 guide (EN) v 0.1

[Enzim2016 guide \(EN\) v 0.1](#)

[Information](#)

[Installation](#)

[Operating systems:](#)

[Prerequisite](#)

[Installation order](#)

[Workflow](#)

[Main menu](#)

[Create new patient](#)

[Database panel](#)

[Diagnostic tree](#)

[Следующие версии программы](#)

Information

Enzim2016 is a software designed to get a preliminary diagnosis of liver diseases, it is based on the following indicating enzymes:

AST, ALT, CK, LDH, ALP, GGT, CE, GDH.

Current version: **0.3.1**

Purpose: **demo**

Language: RU, EN (depends on system settings)

© 2007, 2016 - Vyacheslav Ryabinin, diagnostic algorithms for liver diseases

© 2016, 2017 - Sergei Riabinin, Java development (<https://github.com/kodeir/Enzim2016>);

Enzim2016 was developed within an agreement with Russian Foundation for Basic Research (RFBR) (information to be updated).

Installation

Operating systems:

Tested on: Windows 10, Mac OS 10.11.6

Prerequisite

Java 1.8 should be installed

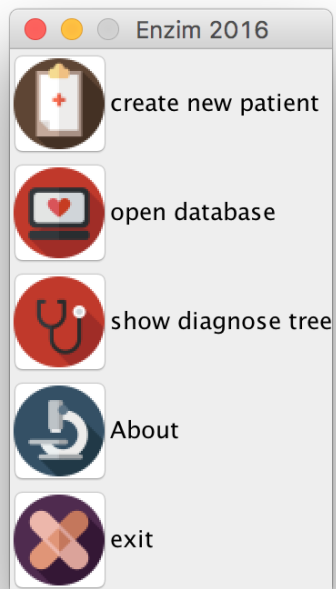
Installation order

1. Download Enzim2016-0.3.1.zip from <https://github.com/kodeir/Enzim2016/>
2. Extract the content from the archive
3. Run enzim2016-0.3.1-SNAPSHOT.jar

Workflow

You can refer to help directly in program using F1.

Main menu



Create new patient	5
Database panel	6
Diagnostic tree	7

Create new patient

create new patient

New patient

Name

Surname

Patronymic

Birthdate (yyyy-mm-dd)

Coefficients

AST	ALT	CK	LDH
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ALP	GGT	CE	GDH
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Checkup date (yyyy-mm-dd)

New patient

- All fields (except birthdate) can take any values.
- Birthdate should be entered in the format YYYY-MM-DD, e.g.: 2016-10-11; 2016-01-01.

All fields must be filled in.

Coefficients

- Coefficients can be entered as integer or fractional, for example: AST = 100, ALT = 105.27.
- It is also required to enter the checkup date in the format YYYY-MM-DD, for example: 2016-10-11; 2016-01-01.

All fields must be filled in.

Database panel

Enzim 2016 Database

Patients list

1. agamanov n.p. ; birthdate:2016-09-25
2. barabanov n.p. ; birthdate:2016-09-25
24. cereteli n.p. ; birthdate:2016-09-25
25. chekmincey n.p. ; birthdate:2016-09-25
5. durov n.p. ; birthdate:2016-09-25
6. egorov n.p. ; birthdate:2016-09-25
27. emanoylov n.p. ; birthdate:2016-09-25
22. faronov n.p. ; birthdate:2016-09-25
4. gurev n.p. ; birthdate:2016-09-25
29. hacker n.p. ; birthdate:2016-09-25
23. hudzyakov n.p. ; birthdate:2016-09-25
9. karenina n.p. ; birthdate:2016-09-25
10. kirilov n.p. ; birthdate:2016-09-25
11. leonidov n.p. ; birthdate:2016-09-25
12. mechnikov n.p. ; birthdate:2016-09-25
13. nosov n.p. ; birthdate:2016-09-25
14. ogurcov n.p. ; birthdate:2016-09-25
15. pirogov n.p. ; birthdate:2016-09-25
16. ryabinin n.p. ; birthdate:2016-09-25
17. serebryanyi n.p. ; birthdate:2016-09-25
26. shuvalov n.p. ; birthdate:2016-09-25
18. sukarev n.p. ; birthdate:2016-09-25
19. timiryazev n.p. ; birthdate:2016-09-25
21. udonov n.p. ; birthdate:2016-09-25
28. umashev n.p. ; birthdate:2016-09-25
20. uvarov n.p. ; birthdate:2016-09-25
3. veneaminov n.p. ; birthdate:2016-09-25
8. zenkin n.p. ; birthdate:2016-09-25
7. zuravlev n.p. ; birthdate:2016-09-25

New patient

Name

Surname

Patronymic

Birthdate (yyyy-mm-dd)

Coefficients list

Coefficients

AST	ALT	CK	LDH
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ALP	GGT	CE	GDH
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Checkup date (yyyy-mm-dd)

Injured organ

Disease

For demo purposes, the database is filled with a small set of data (no real PI is used).

- choose patient on the left
- his PI data and a set of enzymes will appear
- click on a set
- enzymes values will be filled in, injured organ and disease will appear
- click "show diagnose tree" to see the logic about diagnosis

Diagnostic tree

Diagnostic Tree

AST ALT CK LDH

ALP GGT CE GDH

Do diagnose

Injured organ

Disease

Injured organ

- AST 41-150
 - ALT 41-250
 - liver, biliary tract
 - ALT 0-40
 - CK 501-1750
 - skeletal muscle

Disease

- AST 41-150
 - AST/ALT 0.1-0.5
 - LDH 591-2750
 - Infectious mononucleosis
 - LDH 150-590
 - ALP > 270
 - GDH 11-75
 - (AST + ALT) / GDH > 50
 - Obstructive jaundice ?
 - (AST + ALT) / GDH 40-50
 - Obstructive jaundice
 - (AST + ALT) / GDH < 40

Diagnostic panel with a diagnosis tree, which allows you to make the following preliminary diagnoses:

- Damaged organ (s),
- Liver disease.

Tree branches can be opened by double-clicking the mouse.
When diagnosed, the tree will open automatically.

The algorithm of diagnosis is based on the ratio of enzyme parameters: AST, ALT, CK, LDH, ALP, GGT, CE, GDH. Coefficients can be entered as integer or fractional, for example: AST = 100, ALT = 105.27.

... In the next episodes

0.3.x - hot fixes

- installator
- change enzymes abbreviation in java code to international versions
- ability to change patient's data
- ability to delete patient's data
- fix patient's order in a database panel
- fix create patient in database panel: put cursor on a new patient
- checkup date \geq birthdate
- fix error messages (when entering wrong values for enzymes and in DT)
- increase logging
- fix path issues within different OS (check Linux with recent fixes)

0.4.x - security

- move config to jar
- encrypt password
- update SQL queries