

Modern Application Production

Final Project Report

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1. Content

During this course we implemented a simple database management system which was designed to manage hospitals. The system should be able to keep track of the records of the doctors, patients, nurses, and other hospital staff. The main aim is to minimize the paperwork of the hospital as minimum as possible, if not completely.

2. Before/after

Initial state: started from scratch, we only had an idea of a final product

Initial backlog:

1. As a receptionist I want to find people by their names
2. As a receptionist I want to be able to manage patient's appointments
3. As a receptionist, I want to create patient history so that each patient will have one
4. As a doctor, I want to edit patient history so that I won't forget what happen to the patient
5. As a doctor, I want to see the upcoming appointments so that I can prepare for the patient
6. As a patient, I want to get the medical certificate so that I can get sick leave
7. As a patient, I want to setup/cancel an appointment with the needed doctor so that I can go for treatment
8. As a receptionist, I want to assign call to the ambulance so that it can provide fast emergency help
9. As a patient, I want to see the schedule of the doctors so that I can match my schedule with the doctor's schedule
10. As a user, I want to get notifications about the future appointments so that I remember about them
11. As a patient I want to be able to manage my appointments
12. As a receptionist, I want to be able to add new patients to the system so that I can manage them later
13. As a user, I want to go to the profile page so that I see account information and future appointments
14. As a receptionist, I want to manage information about doctors, patients, appointments so that I can reduce paperwork

Final state: GUI connected to PostgreSQL DB via Java with possibility to create new records inside, such as patients, their history and personal information, doctors, etc.

Final implemented backlog:

1. As a receptionist, I want to find people by their names
3. As a receptionist, I want to create patient history so that each patient will have one

12. As a receptionist, I want to be able to add new patients to the system so that I can manage them later

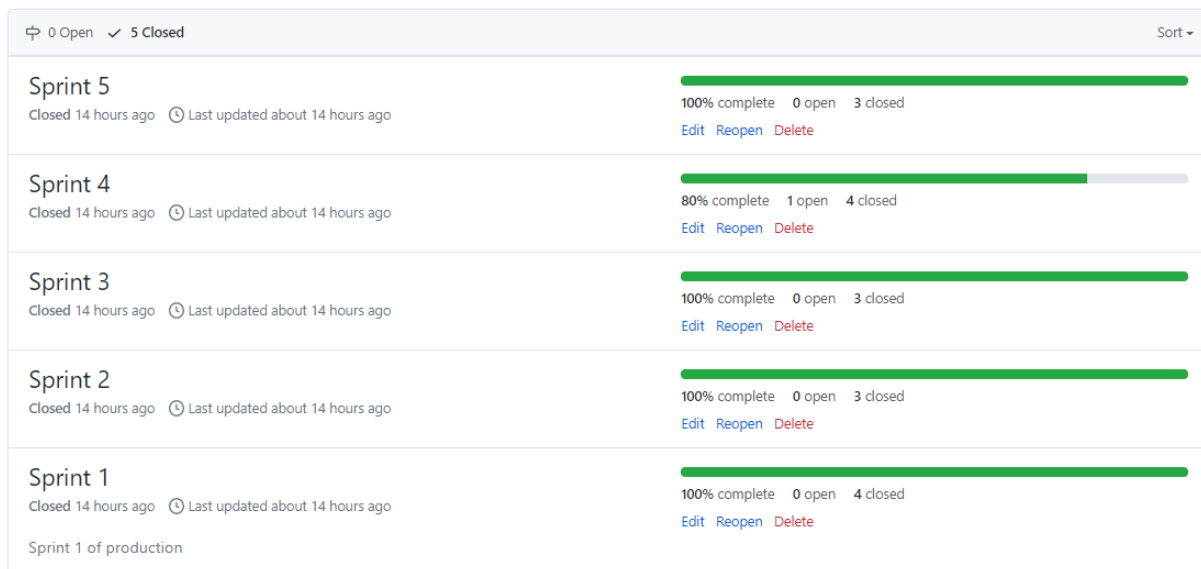
13. As a user, I want to go to the profile page so that I see account information and future appointments

3. Gantt / Schedule / Organization

During the sprints we created the main branch *dev* and three branches for each of the group members.

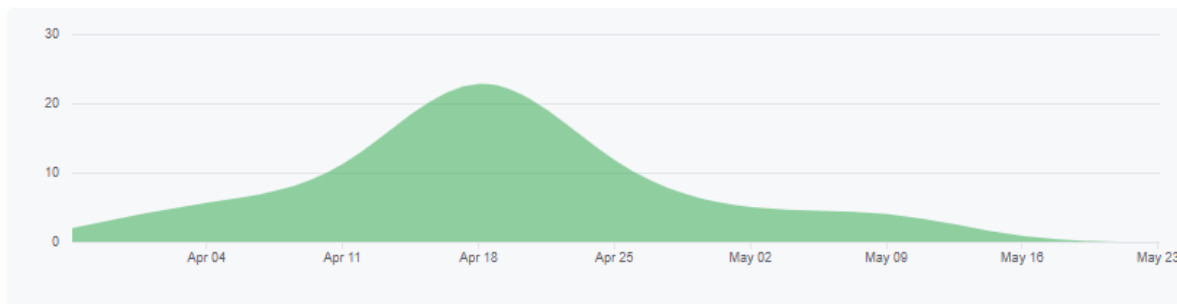
After each sprint we merged work that was done to *dev*. At the end of the project all changes were merged to master.

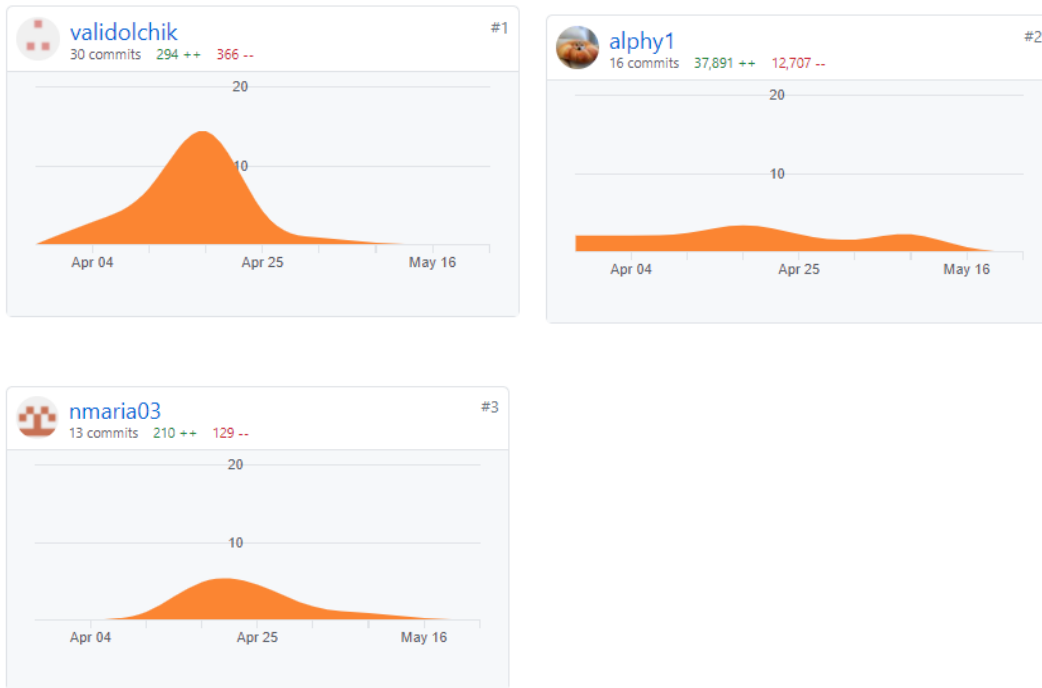
In total, we managed to go through 5 sprints, first of them was, in fact, Sprint 0 - preparation of initial client backlog. Our team spent about 5-7 hours per sprint to complete the project.



Here we may include our personal burn down charts([link](#)):

Contributions to master, excluding merge commits and bot accounts





4. Traceability links demonstration

Assume you want to see why following code appeared, i.e. which issue and US this code connected to:

master ▾ project-ram / src / GUI / Controller.java / <> Jump to ▾ Go to file ...

alphy1 Add more functionalities to search users Latest commit bd8feae 12 days ago History

1 contributor

346 lines (313 sloc) | 14.6 KB Raw Blame

```
1 package GUI;
2
3 import java.net.URL;
4 import java.util.ResourceBundle;
5 import javafx.fxml.FXML;
6 import javafx.scene.control.TextField;
7 import javafx.scene.layout.AnchorPane;
8 import java.io.File;
9 import java.io.FileNotFoundException;
10 import java.util.Scanner;
11 import javafx.event.ActionEvent;
12 import javafx.scene.control.Button;
13 import javafx.scene.control.TextArea;
14 import connect.DBConnect;
15
16
17 public class Controller {
18     @FXML
19     private ResourceBundle resources;
20
21     @FXML
22     private URL location;
23
24     @FXML
```

We can go to the History tab to see commit history on this particular file:

The screenshot shows the commit history for a file. At the top, there's a header with the repository name 'alphy1' and the commit message 'Add more functionalities to search users'. The latest commit is 'bd8feae' from 12 days ago. A red circle highlights the 'History' tab. Below the header, there's a section for 'History for project-ram / src / GUI / Controller.java'. It shows two commits from May 11, 2021: 'Add more functionalities to search users' (commit bd8feae) and 'Finilize GUI and added documentation close *32*' (commit 211d932). Below that, there's a section for 'Commits on Apr 20, 2021' showing 'Added initial user interface close *26*' (commit 1718618).

Then we can choose particular commit and see related information:

The screenshot shows the details of a specific commit. It's titled 'Commits on Apr 20, 2021'. The commit message is 'Added initial user interface close *26*'. The commit is by 'alphy1' and was committed on Apr 20. The commit hash is '1718618'. There are buttons for 'Browse files', 'Compare', and 'Diff'.

Here we can view changes presented by commit and linked pull request(circled with red):

The screenshot shows the commit details page for the commit '1718618'. The commit message is 'Added initial user interface close *26*'. The commit is by 'alphy1' and was committed on Apr 20. The commit hash is '1718618'. There are buttons for 'Browse files', 'Compare', and 'Diff'. A red circle highlights the 'master (P27)' branch. Below the commit details, there's a section for 'Showing 18 changed files with 519 additions and 3 deletions'. It shows a list of files with their changes. The first file is '.idea/.gitignore' with 8 changes. The second file is '.idea/libraries/lib.xml' with 16 changes. The changes are shown in a diff view.

Clicking on number near will open linked pull request and related information:

IU-MAP / project-ram
generated from IU-MAP/MAP-S21-template

Watch 1 Star 0 Fork 0

Code Issues 11 Pull requests 1 Actions Projects 1 Wiki Security Insights Settings

Added initial user interface close *26* #27

Merged validolchik merged 5 commits into dev from dev_alfyx on Apr 20

Conversation 1 Commits 5 Checks 0 Files changed 13

alphy1 commented on Apr 20
Used JavaFX to create gui

validolchik and others added 2 commits on Apr 14
Merge pull request #24 from IU-MAP/dev
Eval Sprint1: work on doc, CI, and MVP

alphy1 requested a review from validolchik on Apr 20

validolchik approved these changes on Apr 20

validolchik left a comment

Reviewers: validolchik
Assignees: No one—assign yourself
Labels: None yet
Projects: None yet
Milestone: No milestone
Linked issues

Scrolling a little will show linked issues:

validolchik approved these changes on Apr 20

validolchik left a comment

Next time create .gitignore in your working directory or create new branch, based on master, because .idea folder contains developers dependent files and can be freely ignored. Content of .gitignore should be .idea/. And don't forget to clear cache after this change

alphy1 changed the base branch from master to dev on Apr 20

alphy1 added 3 commits on Apr 20

Added initial user interface close *26*

Added gitignore

Deleted .idea

validolchik linked an issue that may be closed by this pull request on Apr 20

[Task] Initial user interface #26

validolchik merged commit #02ccfe into dev on Apr 20

Linked issues

Successfully merging this pull request may close these issues.

[Task] Initial user interface

Notifications

Unsubscribe

You're receiving notifications because you modified the open/close state.

3 participants

Lock conversation

IU-MAP/project-ram on Apr 20

[Task] Initial user interface #26

mention US which this task relates to #3

Task

[Task] Initial user interface

Opening this issue will show all information about this issue, including to which US it is connected:

IU-MAP / project-ram
generated from IU-MAP/MAP-S21-template

Watch 1

Star 0

Fork 0

<> Code

Issues 11

Pull requests 1

Actions

Projects 1

Wiki

Security

Insights

Settings

[Task] Initial user interface #26

EditNew issue

Closed

alphy1 opened this issue on Apr 20 · 0 comments

alphy1 commented on Apr 20

Member

mention US which this task relates to

[#3](#)

alphy1 added the Task label on Apr 20

alphy1 self-assigned this on Apr 20

alphy1 added this to the Sprint 2 milestone on Apr 20

alphy1 added this to To do in RAM Hospital management via automation on Apr 20

Assignees

alphy1

Labels

Task

Projects

RAM Hospital management

Done

Milestone

Sprint 2

In this case this issue connected to US #3:

[Task] Initial user interface #26

Closed

alphy1 opened this issue on Apr 20 · 0 comments

IU-MAP/project-ram on Apr 13

Closed

[US]As a user, I want to go to the profile page so that I see account information and future appointments #3

Backlog

You opened

mention US which this task relates to

[#3](#)

With following content:

<> Code

Issues 11

Pull requests 1

Actions

Projects 1

Wiki

Security

Insights

Settings

[US]As a user, I want to go to the profile page so that I see account information and future appointments #3

EditNew issue

Closed

validolchik opened this issue on Apr 13 · 1 comment

validolchik commented on Apr 13

Member

No description provided.

validolchik added the Backlog label on Apr 13

validolchik added this to To do in RAM Hospital management via automation on Apr 13

alphy1 commented on Apr 13

Member

#6 #8 #18

alphy1 added this to the Sprint 2 milestone on Apr 20

alphy1 mentioned this issue on Apr 20

[Task] Initial user interface #26

Closed

Assignees

No one—assign yourself

Labels

Backlog

Projects

RAM Hospital management

Done

Milestone

Sprint 2

Linked pull requests

Successfully merging a pull request may close this issue.

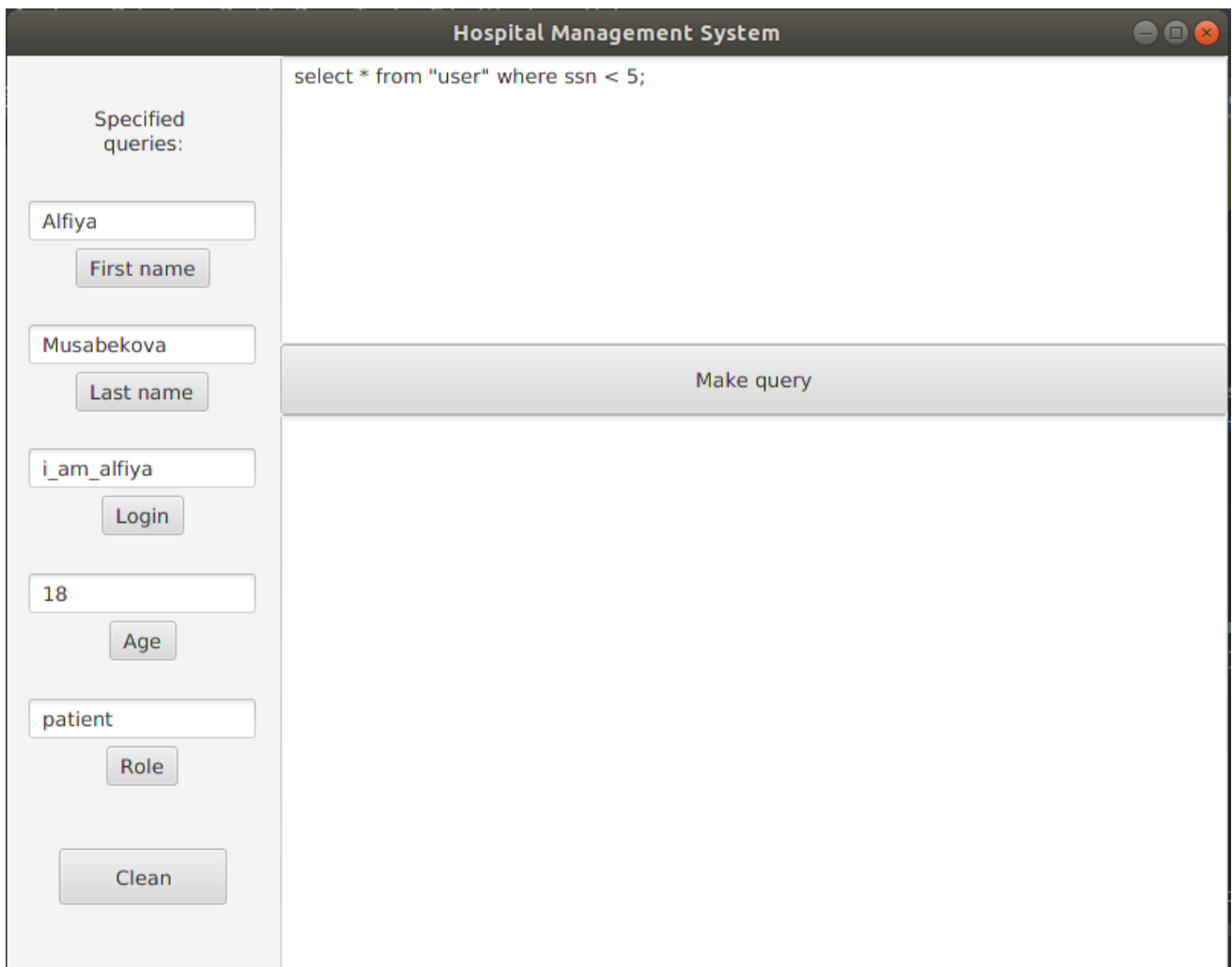
None yet

5. Documentation

Relation Scheme of database generated automatically and Use Case Diagram can be found in *Readme.md* on the main page of our github repository.

Instructions on how to set up an environment for development purposes are shown at the top of *Readme.md* on the main page of our github repository.

Our project is not fully completed for users, but this is how it will look at the end([link](#)):



The screenshot displays a web application titled "Hospital Management System". On the left side, under the heading "Specified queries:", there are several input fields and buttons. The first field contains "Alfiya" with a "First name" button below it. The second field contains "Musabekova" with a "Last name" button below it. The third field contains "i_am_alfiya" with a "Login" button below it. The fourth field contains "18" with an "Age" button below it. The fifth field contains "patient" with a "Role" button below it. At the bottom of this section is a "Clean" button. On the right side, there is a large text area containing the SQL query: `select * from "user" where ssn < 5;`. Below this text area is a wide "Make query" button.

Users will be able to search people by their name/login/age or role. Also there is an option to create new queries for more advanced users. Not all of the fields have to be filled, search can be performed by one of the fields.

6. Tests

Unfortunately, we were not able to write tests.

7. Release

About CI: Managed to gain some information about how to work with Github Actions, write some workflows for it, but didn't manage to write a test, that is why not implemented as it should be.

About release, tags: Currently one release, available from the main page. There you can download it to local machine and continue developing

The screenshot shows the GitHub repository page for IU-MAP/project-ram. The repository is generated from IU-MAP/MAP-521-template. The main navigation bar includes links for Code, Issues (11), Pull requests (1), Actions, Projects (1), Wiki, Security, Insights, and Settings. The repository has 1 Watch, 0 Stars, and 0 Forks. The main content area shows a merge pull request #40 from IU-MAP/dev, created 37 minutes ago with 88 commits. Below the merge request is a table of files and their commit history. The right sidebar contains the About section, which includes a link to the Releases page (1 tag) and a link to create a new release. The Releases section is circled in red. Below the Releases section is the Packages section, which shows no packages published.

File	Commit	Time
.github	edited branch on which test sr...	18 days ago
.idea	Add more functionalities to search users	12 days ago
db	Added connection to database close *8*	20 days ago
images	Added images for documentation	12 days ago
libs	Finilize GUI and added documentation close *32*	13 days ago
out/production/project-ram/GUI	Add more functionalities to search users	12 days ago
radarChart_files	Initial commit	2 months ago
sql	Add more functionalities to search users	12 days ago
src	Add more functionalities to search users	12 days ago
.gitignore	Add more functionalities to search users	12 days ago

Releases
1 tags
[Create a new release](#)

Packages
No packages published
[Publish your first package](#)

Basic hospital management system on Java with PostgreSQL
validolchik released this now
GUI for manipulating the local PostgreSQL DB with scheme, shown in README, implemented. Instructions for setting environment is described in README. Future development is possible. Not for commercial use!

Assets 2
[Source code \(zip\)](#)
[Source code \(tar.gz\)](#)

8. Quality assessment

We did not use quality assessment tools.

9. Self-criticism

Points for proudness:

1. Manage to implement better version of project, which have some pretty looking GUI, and able to handle some of the initial product stack
2. Teamwork - every sprint we gathered and shared with progress and have done during the sprint, discussed the next steps in development, helped each other
3. Get some knowledge on Github Actions and how to configure it, touched Maven
4. Learned how projects, such as ours, should be managed in order to have continuous progress on it.

What should have been done better:

1. Setup everything for development in the 0th sprint in order not to spend time on it during sprints.
2. In order to make some valuable product, more hours should be dedicated to it in order to be constantly aware of status and not spend time revising what needs to be done in the current sprint.
3. Tests should be implemented in early stages of projects, so that it is easier to add new.
4. Solid knowledge in CI and how to implement it for project

10. References:

- a. <https://github.com/IU-MAP/project-ram>
- b. <https://jmbruel.github.io/InnopolisModernApplicationProduction/>