

UNIVERZITET DŽEMAL BIJEDIĆ U MOSTARU
FAKULTET INFORMACIJSKIH TEHNOLOGIJA MOSTAR

SEMINAR

Agilni software development toolbox

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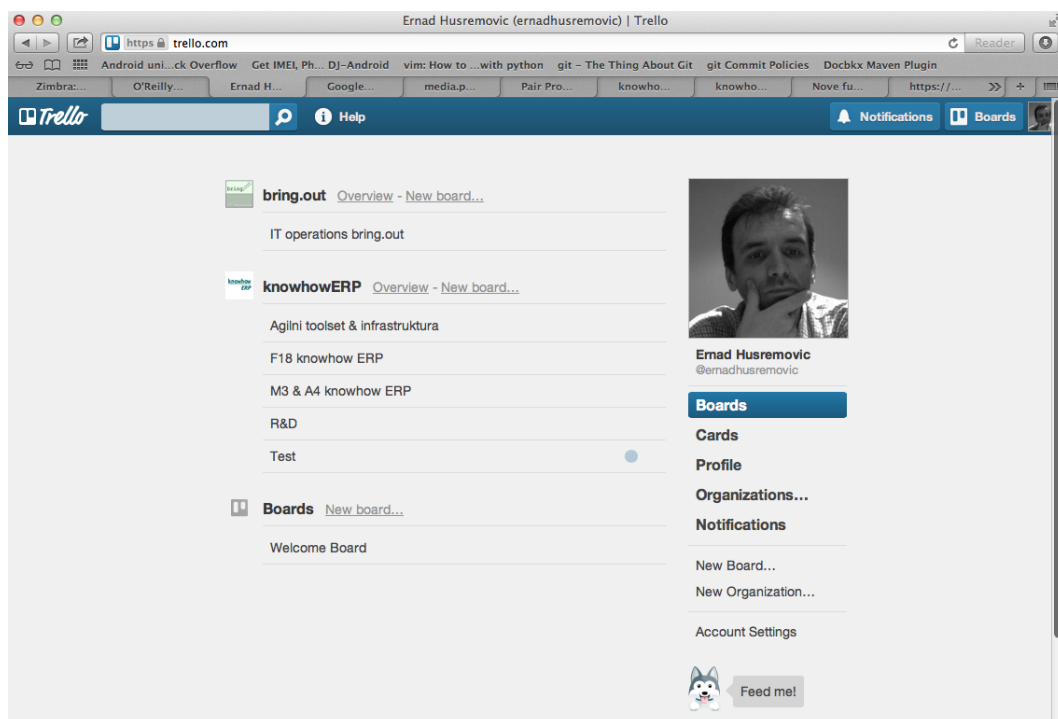
1. Uvod

Materijal sadrži *Case-study* alata i servisa koje koristi firma "bring.out" doo Sarajevo za potrebe razvoja software-a.

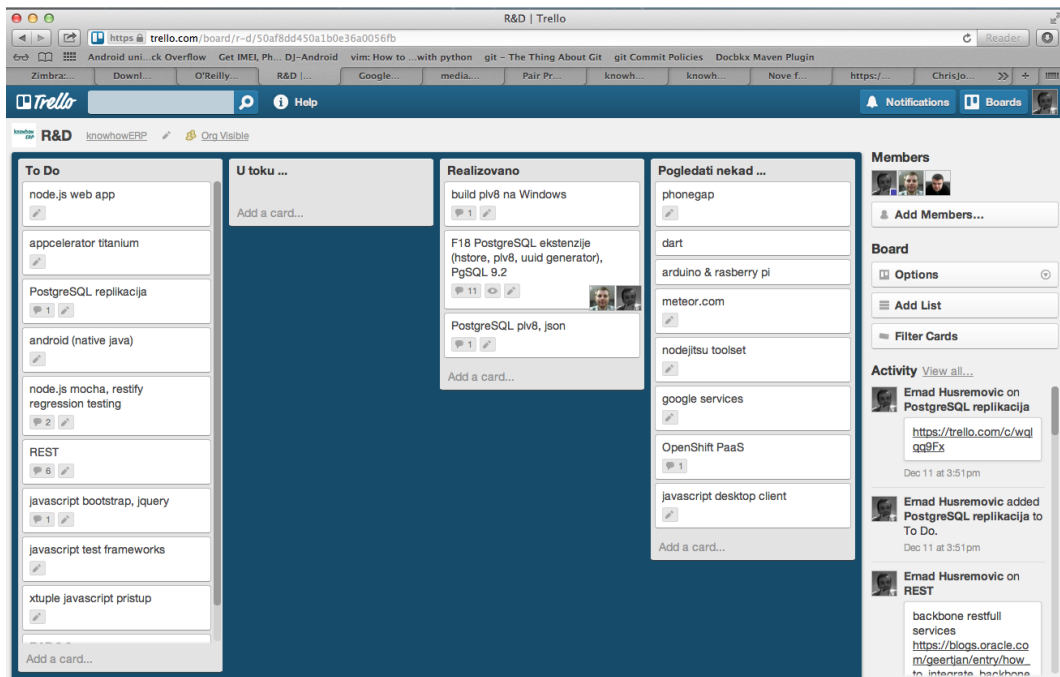
2. Upravljanje i praćenje projekata i tekućih operacija

2.1. Trello projekt menadžment

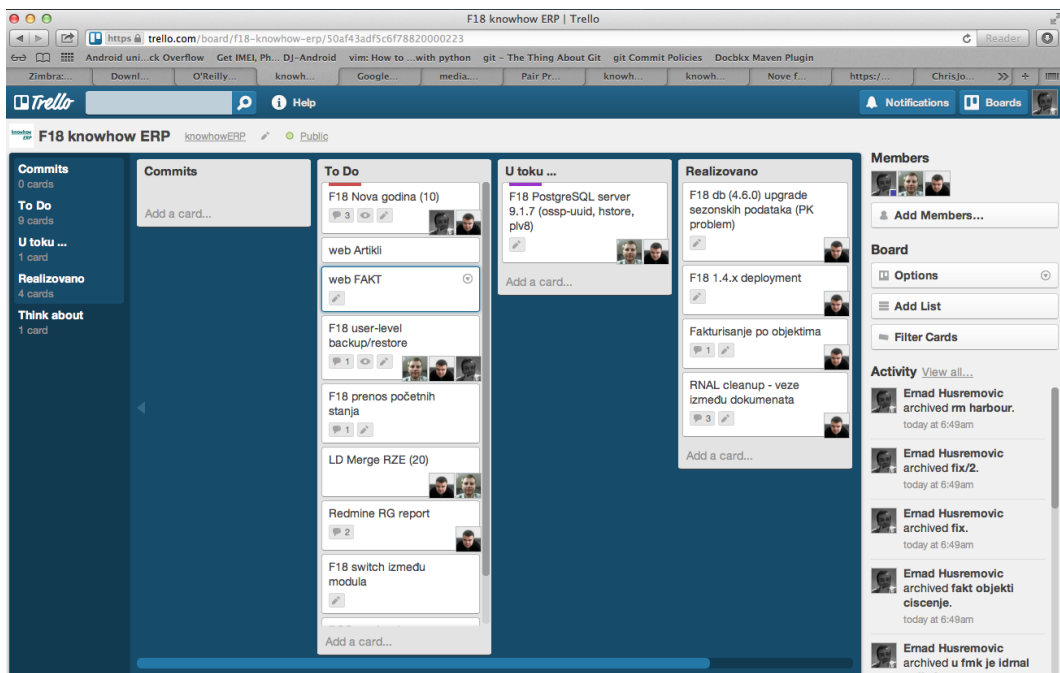
- F18 trello
- Agilni toolset
- Research & development (R&D)



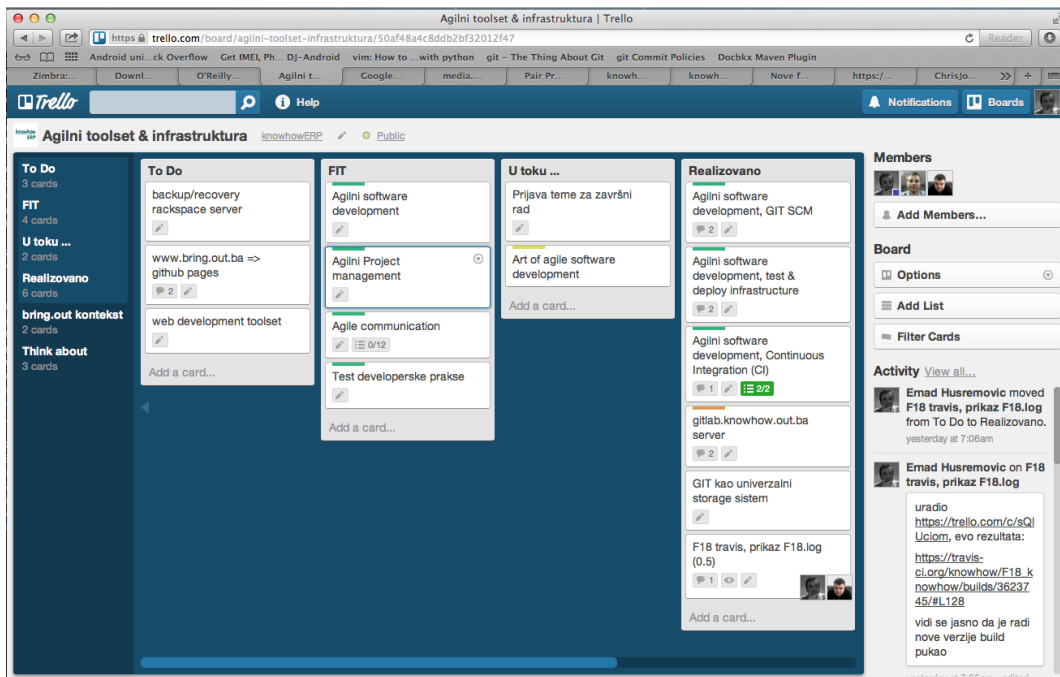
Slika 2.1: Trello "dashboard"



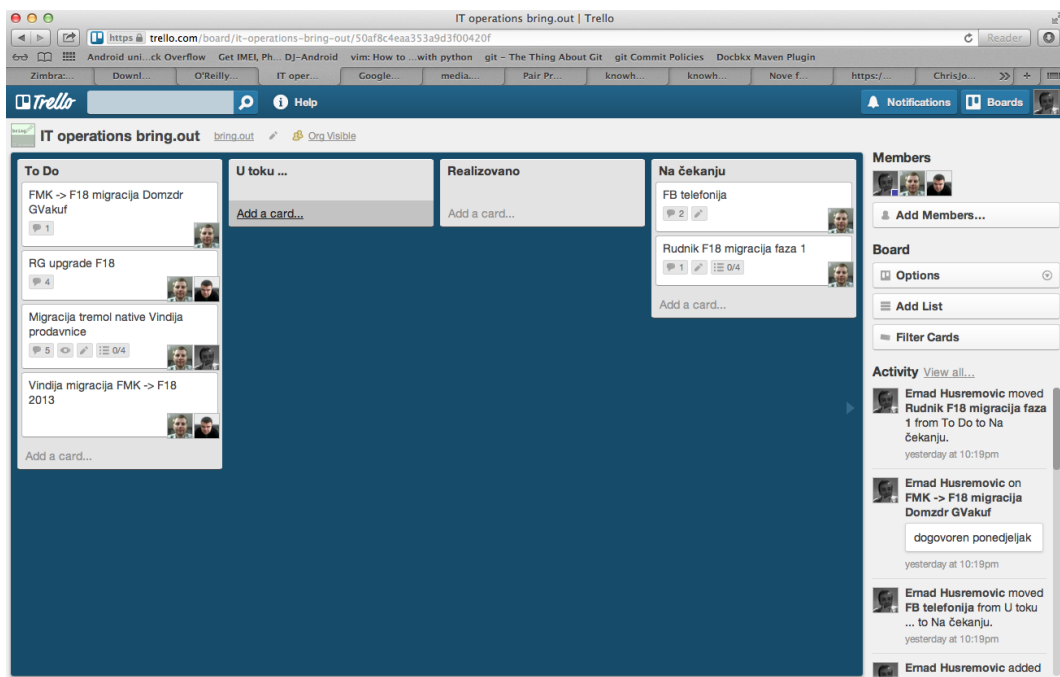
Slika 2.2: Projekat: Research & development



Slika 2.3: Projekat: F18



Slika 2.4: Projekat: Agilni toolset



Slika 2.5: Projekat: IT operacije bring.out

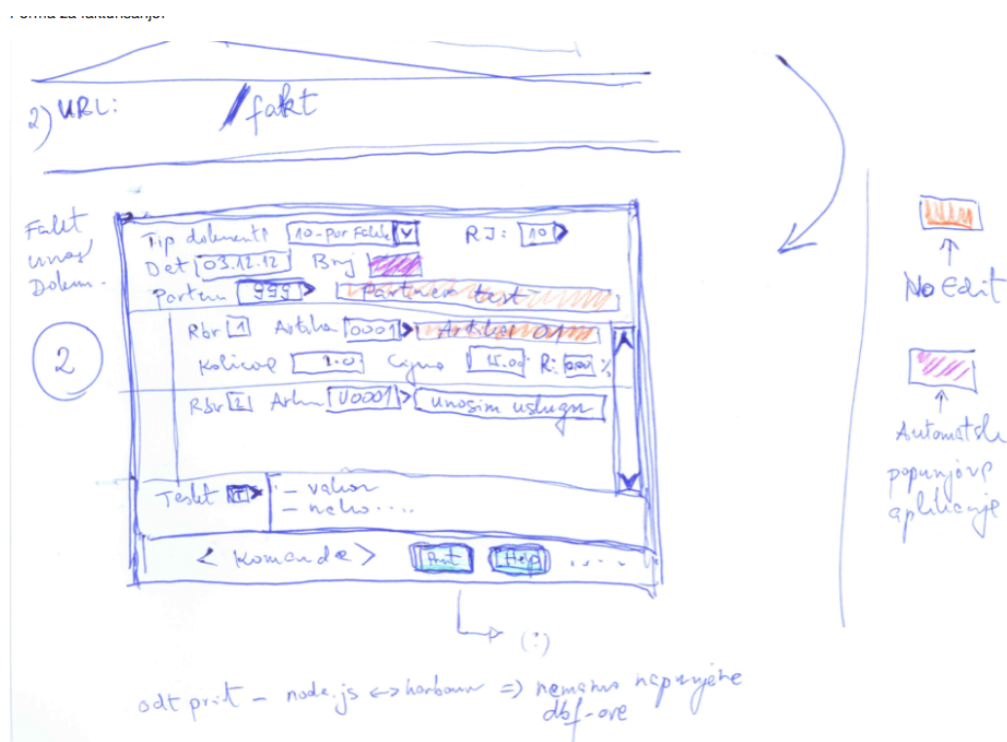
2.2. Redmine project management

<http://redmine.bring.out.ba/projects/f18>

3. Dizajn

3.1. Papir, olovka, bojice

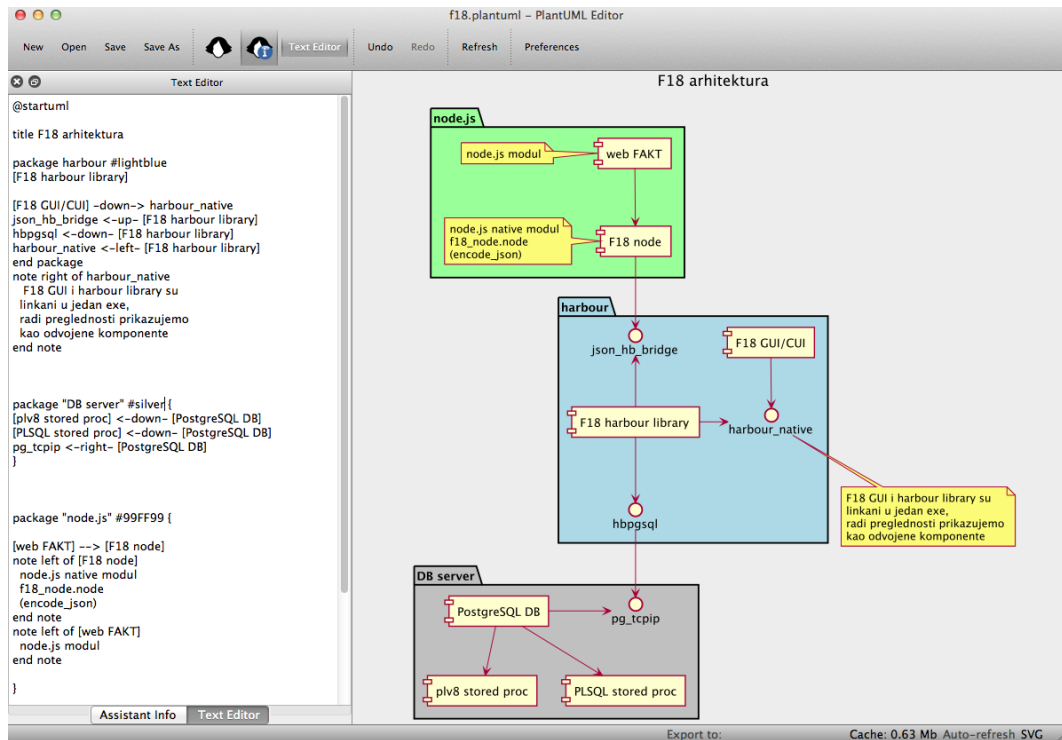
Skiciraj kako god ti odgovara. Bitno je da zadovolji svrhu - da prezentuje ideju, rješenje, koncept.



Slika 3.1: Papir, bojice, olovka

Primjer korištenja: [web FAKT UI prototip](#)

3.2. PlantUML



Slika 3.2: Plant UML

Primjer korištenja: [F18 arhitektura](#)

Plantuml editor i plantuml.jar [download](#)

3.3. Erviz ER-dijagrami

```
# Using Erviz 0.9.0
{title: "Syn2Stock_ERD_V3"; title-size: 20}

# Entities

[Item] {color:red}
*Item ID
Type
SimpleItem
...
Sources
Source ID*
Location ID*
```

```

Lending ID*

[Source]
*Source ID
Price
...
Manufacturer

[Location]
*Location ID
...
Room
Locker

[Lending]
*Lending ID
Borrowed by
...
Reminder ID*

[Reminder]
*Reminder ID
Start Date
...
Message
Item ID*
Lending ID*

[Event]
*Event ID
Event Type
Date
User
Item ID*

[Attachment]
*Attachment ID
File
External URL
Private

[Electronic Part] {color:orange}
*Electronic Part ID
Value

```

```

Item ID*

[Book] {color:orange}
*Book ID
  Subtitle
  ...
  Summary
  About the Author
  Item ID*

# Relationships
[Item] *--* [Source]
[Item] 1--1 [Location]
[Item] 1--* [Lending]
[Item] *--* [Attachment]
[Reminder] ---- [Item]
[Event] *--1 [Item] <contains->
[Electronic Part] ---- [Item] <is a->
[Book] ---- [Item] <is a->

```

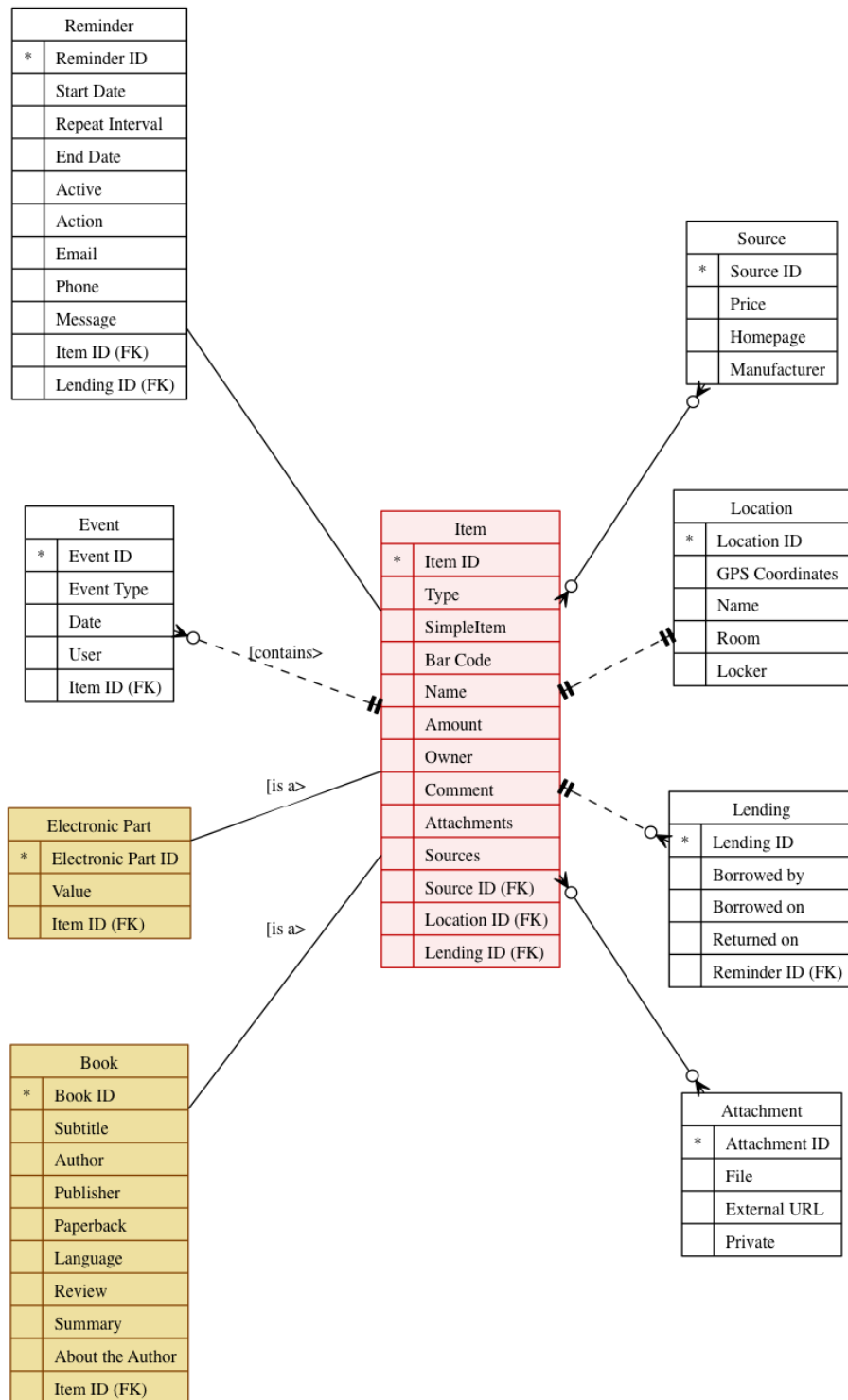
generacija dijagrama:

```

erwiz$ bin/erwiz examples/example.txt erwiz_example.png

```

Syn2Stock ERD V3



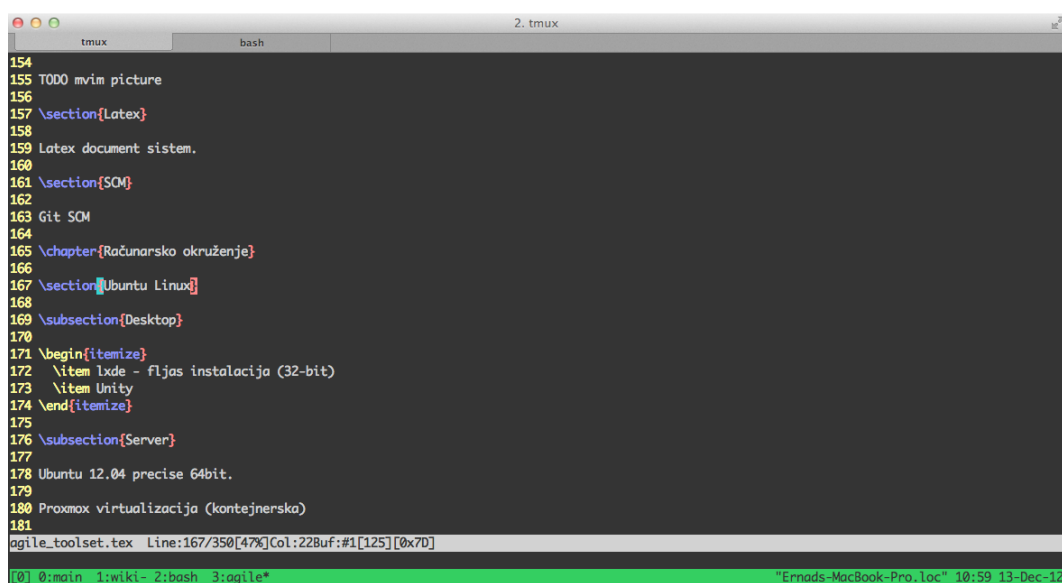
Slika 3.3: Erwiz E-R dijagram

Erwiz [download](#)

4. Pisanje izvornog kôda, dokumentacija

4.1. Tekst editor

4.1.1. vim - konzolni tekst editor

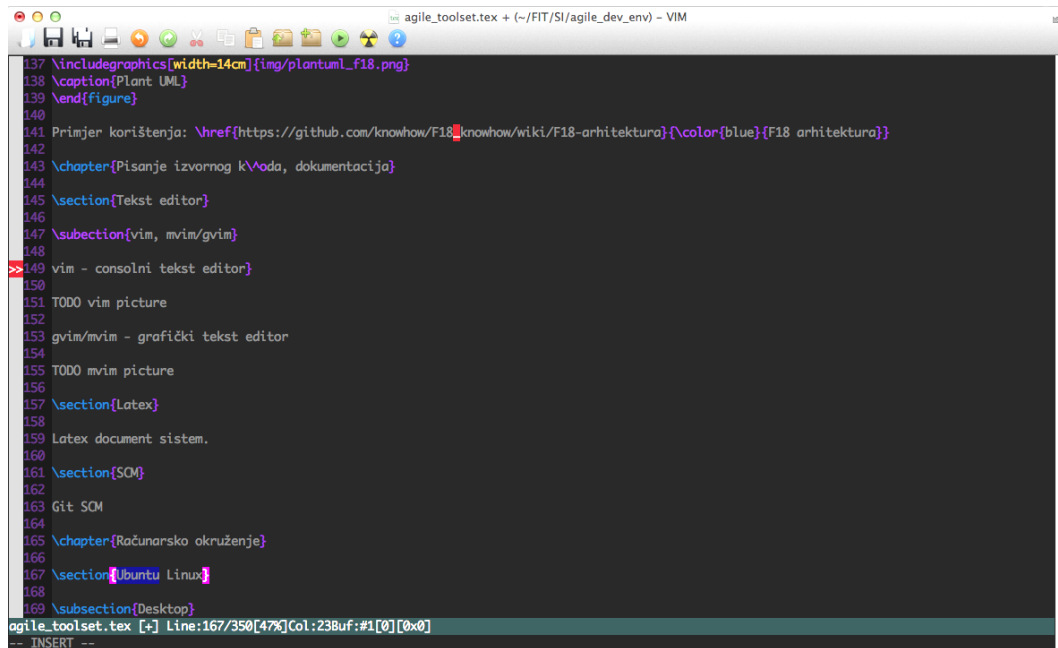


The screenshot shows a terminal window titled "2. tmux" with a tab labeled "tmux". Inside, a vim editor is open, editing a file named "agile_toolset.tex". The editor displays a LaTeX document structure with various sections and subsections. The line numbers 154 through 181 are visible on the left. The document content includes sections for "Latex", "SQM", "Računarsko okruženje", "Ubuntu Linux", and "Server". The status bar at the bottom shows the file name, line and column numbers, and the current buffer.

```
154
155 TODO mvim picture
156
157 \section{Latex}
158
159 Latex document sistem.
160
161 \section{SQM}
162
163 Git SQM
164
165 \chapter{Računarsko okruženje}
166
167 \section{Ubuntu Linux}
168
169 \subsection{Desktop}
170
171 \begin{itemize}
172 \item lxde - fljas instalacija (32-bit)
173 \item Unity
174 \end{itemize}
175
176 \subsection{Server}
177
178 Ubuntu 12.04 precise 64bit.
179
180 Proxmox virtualizacija (kontejnerska)
181
agile_toolset.tex Line:167/350[47%]Col:22Buf:#1[125][0x7D]
[0] 0:main 1:wiki- 2:bash 3:agile* "Ernads-MacBook-Pro.loc" 10:59 13-Dec-12
```

Slika 4.1: vim

4.1.2. gvim/mvim - grafički tekst editor



Slika 4.2: mvim, Mac OS X grafička verzija vim editora

4.1.3. notepad++

Notepad++ za Windows OS.

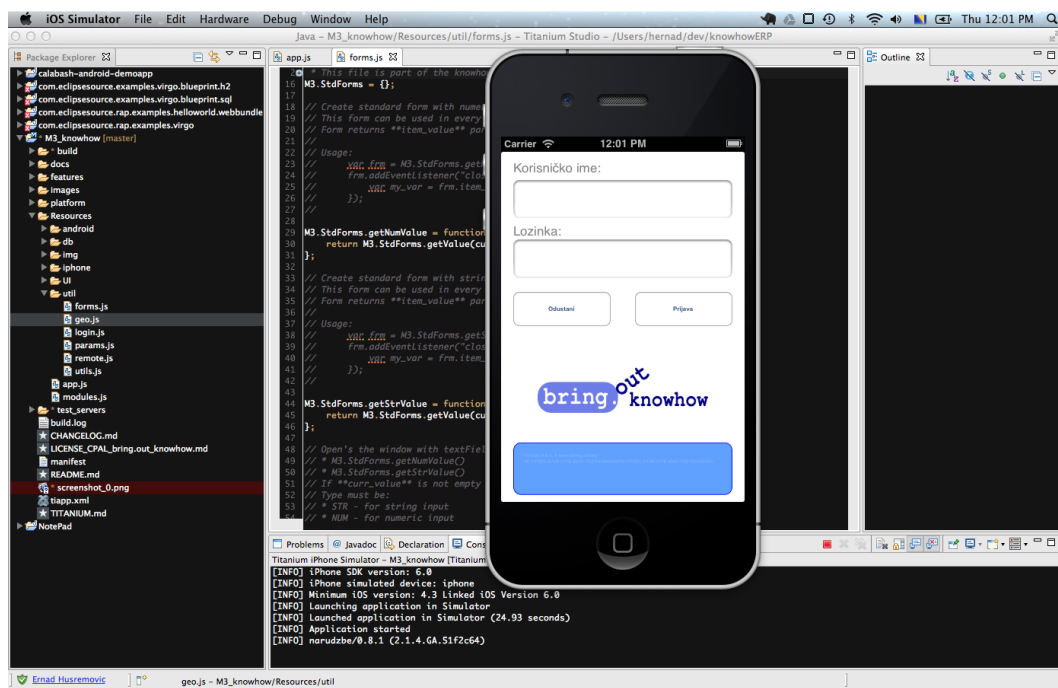
4.2. Latex

Latex document sistem.

4.3. SCM

Git SCM

4.4. Appcelerator Titanium IDE



Slika 4.3: Appcelerator IDE, razvoj M3 mobilnog klijenta

5. Računarsko okruženje

5.1. Ubuntu Linux

5.1.1. Desktop

- lxde - fijas instalacija (32-bit)
- Unity

5.1.2. Server

Ubuntu 12.04 precise 64bit.

Proxmox virtualizacija (kontejnerska)

5.2. Mac OS X

Developersko okruženje

5.3. Windows OS

Radi testiranja Windows OS verzija F18.

Uobičajeno se koristi unutar developerske virtualbox sesije.

6. Testiranje

6.1. Oracle Virtualbox

Vbox

6.2. vagrant

Vagrant vbox + test

6.3. chef

Chef configuration management

7. Programski jezici

7.1. bash

Administracijske i instalacijske skripte.

Stepen korištenja: 4

7.2. SQL

PostgreSQL dijalekt.

Nivo korištenja: 3

7.3. javascript

7.3.1. browser

Nivo korištenja: 0

7.3.2. node.js

Nivo korištenja: 0

7.3.3. appcelerator titanium javascript

Mobilni (hibridni) klijent

Nivo korištenja: 2

7.3.4. android java

appcelerator ekstenzije, sporadično se koristi.

Nivo korištenja: 1

7.4. harbour

F18 izvorni kôd.

Nivo korištenja: 5

7.5. HTML, CSS

Nivo korištenja: 0

7.6. C/C++

Uglavno kao bridge jezik za različite tehnologije (harbour-node.js, ruby ekstenzije za alarm sistem)

Nivo korištenja: 3

7.6.1. xTuple source

knowhowERP GUI klijent (xTuple) je pisan (core sistem) u C/C++. Međutim, taj klijent se ne razvija aktivno.

Updater koji se koristi za migraciju F18 se svakodnevno koristi (ali se sam updater rijetko mijenja)

7.7. java

Postoje bitni "java" bazirani projekti koji se intenzivno koriste:

- zimbra
- jod-reports

Međutim, sam programski jezik se ne koristi u razvoju.

Nivo korištenja: 0

7.8. ruby

Koristi se uglavnom za pomoćne operacije.

Postoje stariji projekti rađeni u ruby-ju (alarm)

Nivo korištenja: 3

7.9. python

Malo se koristi.

Postoje stariji projekti rađeni u python-u (sql_synchro)

Nivo korištenja: 2

8. Frameworks

8.1. Twitter bootstrap

8.2. express node.js

9. Test programmer frameworks

9.1. node.js testing frameworks

9.1.1. Jasmine

Browser, node.js

9.1.2. vows

9.1.3. mocha

<http://visionmedia.github.com/mocha>

10. Database alati

10.1. PostgreSQL

10.1.1. PgAdmin

PostgreSQL GUI konzola

10.1.2. psql

postgresql konzolna aplikacija

10.1.3. Postgres.app

Mac OS X <http://postgresapp.com>

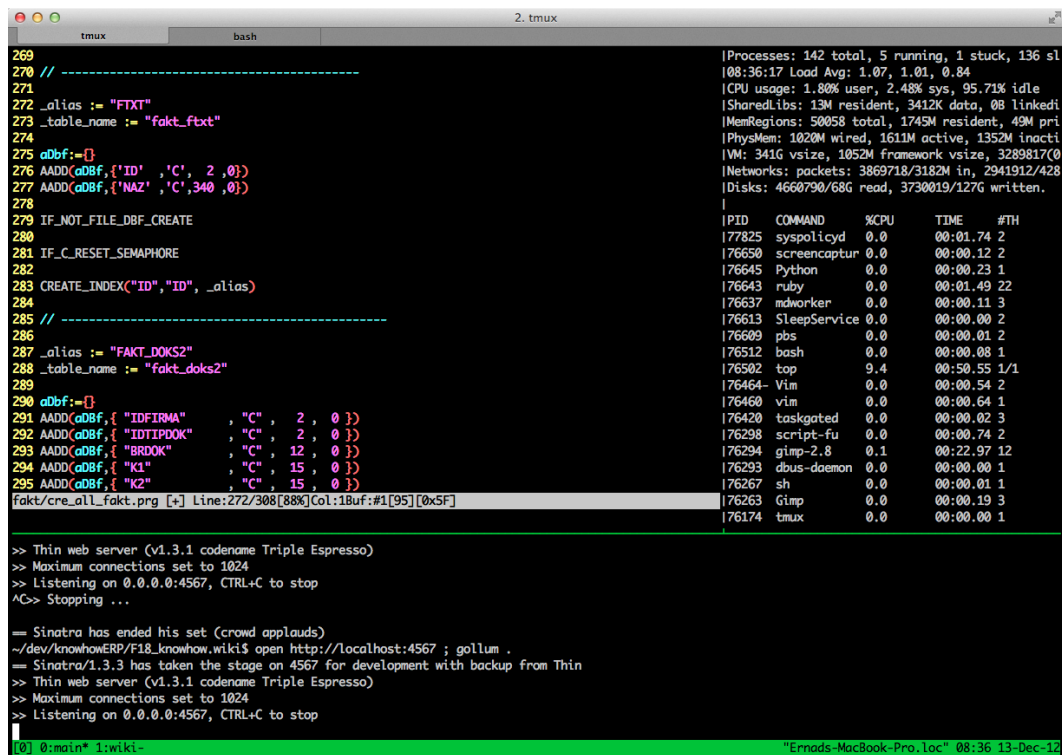
Ekstenzije:

- hstore
- plv8
- ossd-uuid

11. Ostali alati

11.1. konzola

11.1.1. tmux - Terminal multiplekser



```
269
270 // -----
271
272 _alias := "FTXT"
273 _table_name := "fakt_ftxt"
274
275 aDbf:=[]
276 AADD(aDbf,{ 'ID' , 'C' , 2 , 0 })
277 AADD(aDbf,{ 'NAZ' , 'C' , 340 , 0 })
278
279 IF _NOT_FILE_DBF_CREATE
280
281 IF _C_RESET_SEMAPHORE
282
283 CREATE_INDEX("ID", "ID", _alias)
284
285 // -----
286
287 _alias := "FAKT_DOKS2"
288 _table_name := "fakt_doks2"
289
290 aDbf:=[]
291 AADD(aDbf,{ "IDFIRMA" , "C" , 2 , 0 })
292 AADD(aDbf,{ "IDTIPDOK" , "C" , 2 , 0 })
293 AADD(aDbf,{ "BRDOK" , "C" , 12 , 0 })
294 AADD(aDbf,{ "K1" , "C" , 15 , 0 })
295 AADD(aDbf,{ "K2" , "C" , 15 , 0 })
fakt/cre_all_fakt.prg [*] Line:272/308[88%]Col:1Buf:#1[95][0x5F]

>> Thin web server (v1.3.1 codename Triple Espresso)
>> Maximum connections set to 1024
>> Listening on 0.0.0.0:4567, CTRL+C to stop
^C> Stopping ...

== Sinatra has ended his set (crowd applauds)
~/dev/knownhowERP/F18_knowhow.wiki$ open http://localhost:4567 ; gollum .
== Sinatra/1.3.3 has taken the stage on 4567 for development with backup from Thin
>> Thin web server (v1.3.1 codename Triple Espresso)
>> Maximum connections set to 1024
>> Listening on 0.0.0.0:4567, CTRL+C to stop

[0] 0:main* 1:wiki- "Errnads-MacBook-Pro.loc" 08:36 13-Dec-12
```

System statistics and process list:

```
|Processes: 142 total, 5 running, 1 stuck, 136 sl
|08:36:17 Load Avg: 1.07, 1.01, 0.84
|CPU usage: 1.80% user, 2.48% sys, 95.71% idle
|SharedLibs: 13M resident, 3412K data, 00 linked
|MemRegions: 50058 total, 1745M resident, 49M pri
|PhysMem: 1020M wired, 1611M active, 1352M inacti
|VM: 341G vsize, 1052M framework vsize, 3289817(0
|Networks: packets: 3869718/3182M in, 2941912/428
|Disks: 4660790/68G read, 3730019/127G written.

|PID  COMMAND  %CPU  TIME  #TH
|77825 syspolicyd 0.0    00:01.74 2
|76650 screencaptur 0.0    00:00.12 2
|76645 Python 0.0    00:00.23 1
|76643 ruby 0.0    00:01.49 22
|76637 mdworker 0.0    00:00.11 3
|76613 SleepService 0.0    00:00.00 2
|76609 pbs 0.0    00:00.01 2
|76512 bash 0.0    00:00.08 1
|76502 top 9.4    00:50.55 1/1
|76464 Vim 0.0    00:00.54 2
|76460 vim 0.0    00:00.64 1
|76420 taskgated 0.0    00:00.02 3
|76298 script-fu 0.0    00:00.74 2
|76294 glimp-2.8 0.1    00:22.97 12
|76293 dbus-daemon 0.0    00:00.00 1
|76267 sh 0.0    00:00.01 1
|76263 Gimp 0.0    00:00.19 3
|76174 tmux 0.0    00:00.00 1
```

Slika 11.1: tmux

11.2. ssh, scp

Remote pristup ubuntu linux serverima.

11.3. rsync

11.4. Pretraga

11.4.1. Grep, ack, sed

ack, grep

11.4.2. vgrep

Pretraga unutar vi editora

12. Grafička obrada

12.1. Video editing

QuickTime screen capture (Mac OS X)

12.2. Bitmap picture

Gimp

12.3. Vector picture

Inkscape

13. Uredske aplikacije

13.1. LibreOffice

Writer, Calc, rijetko Impress

13.2. zimbra email

14. Internet provajderi

14.1. Google code, downloads servis

- <http://code.google.com/p/knowhow-erp/downloads/list>
- <http://code.google.com/p/knowhow-erp-f18/downloads/list>
- <http://code.google.com/p/knowhow-erp-fmk/downloads/list>

14.2. Github, GIT repozitorij, WikiPages

- GIT repozitorij https://github.com/knowhow/F18_knowhow
- Github WikiPages https://github.com/knowhow/F18_knowhow/wiki

14.3. Travis CI

- https://travis-ci.org/knowhow/F18_knowhow

14.4. Youtube video materijali

Youtube bringoutba kanal koristimo <http://www.youtube.com/user/bringoutba>.

Koristi se za prezentacije:

- Unutar razvojnog tima
- Za krajnje korisnike

14.5. Rackspace

Cloud hosting provjader

14.6. Blogiranje

Posterous:

- `http://www.bring.out.ba`
- `http://do-we-know-how.bring.out.ba`

15. Korišteni formati podataka

15.1. txt

Plain text format.

15.1.1. Markdown markup jezik

Github WikiPages, README projekata

15.1.2. (La)tex

Latex format

15.2. OASIS open document format (ODT)

odt, ods

15.3. json

Data exchange format. Pogodan i za konfiguracijske datoteke.

15.4. PDF

PDF - de-facto standard za razmjenu dokumenata.

15.5. PNG

png grafički bitmap format

15.6. SVG

Inskape svg, standard internet SVG