Backend views

Course

Packages

Levels

Tasks

Exercise generation

Answer validation

User info

User round data

Activity log

User activity:
- round #
- task # per round
- Level #
- task

Frontend

Frontend views:

Course view
- Get packages
- Get levels for each package

Task view
- Request task for level
- Request exercise for task

Exercise submissions
- count round steps
- collect input
- send to backend
- present results
- ... repeat?

Level summary
- collect stats for level + round

Get

Render

Render

Submit

Render

Render

Session data?

- round exercise count and other temporary stuff

Exercise interactions: Student

User interactions / templates:

Course

Package 1
- Level 1
- Level 2
- Level 3

(Package 2)

- View list of Packages and levels + level progress

Q: word
A: _____
[submit]
Ø _____ 100

(level:)
- Start answering questions

10x

Q: word
A: words _Ok!_
(feedback)
Ø _____ 100

- View or add new answer, get feedback
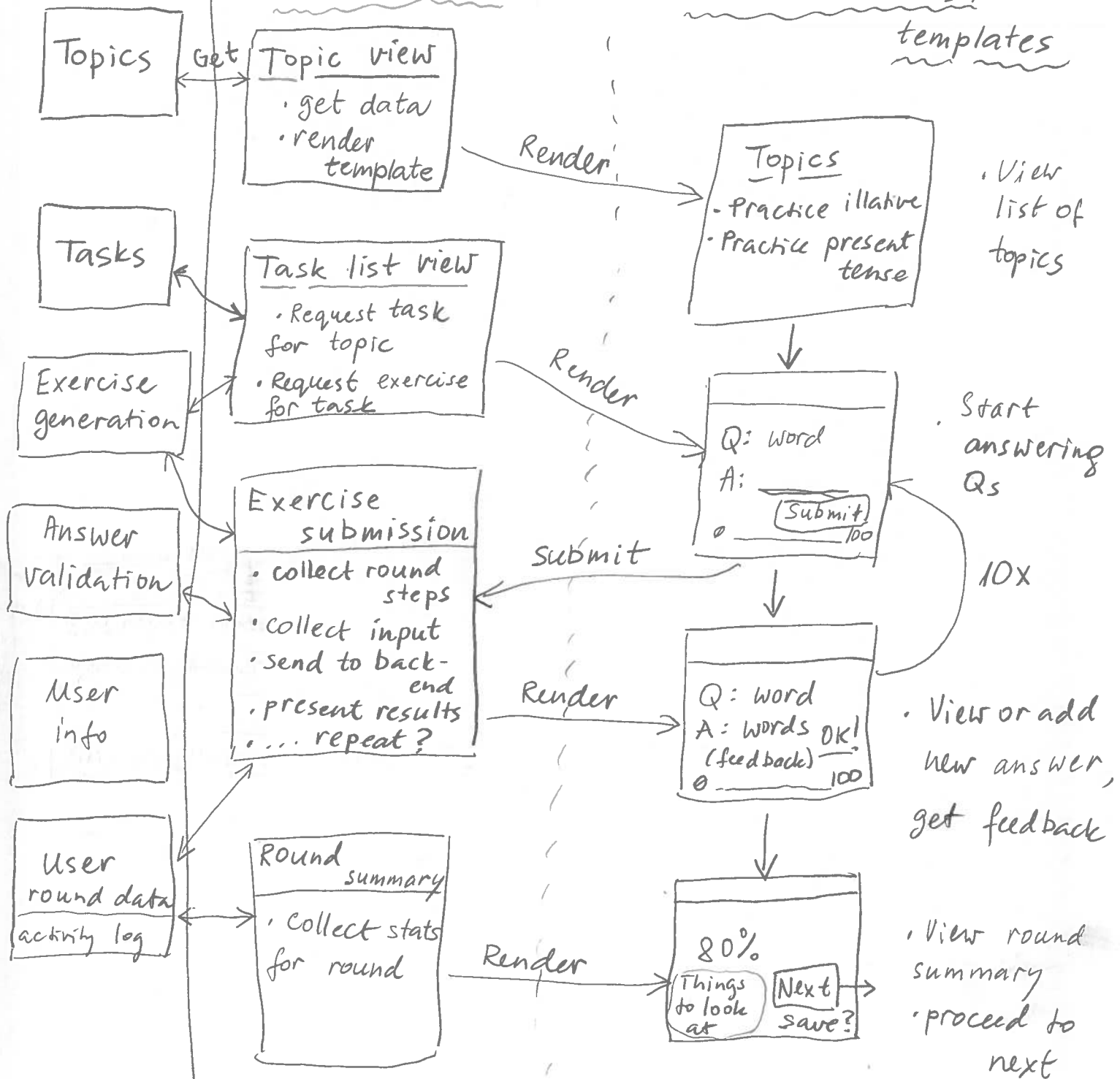
80% [Next] →
things to look at:
Save?

- View round summary
- procede to next level

OR

- repeat level with new round if necessary

Backend Views

Frontend Exercise Interactions: Student

Frontend views

User interactions / templates

Topics —Get→ **Topic view**
- get data
- render template

—Render→

Topics
- Practice illative
- Practice present tense

- View list of topics

Tasks ← **Task list view**
- Request task for topic
- Request exercise for task

Exercise generation

—Render→

Q: word
A: ___
(Submit)
0 _____ 100

- Start answering Qs

10X

Answer validation

Exercise submission
- collect round steps
- collect input
- send to back-end
- present results
- ... repeat?

←Submit—

User info

—Render→

Q: word
A: words OK! (feedback)
0 _____ 100

- View or add new answer, get feedback

User round data / **activity log**

Round summary
- Collect stats for round

—Render→

80%
(Things to look at) (Next save?)

- View round summary
- proceed to next

Outside stuff

Learning packages

Lookup server | analyze CG, etc.

FST + lexicon browser

FST / lexicon views
list, select

semantics, type, exercise type

Ling. DB — models

Task actions

Level views
List by level

User DB — models

task views
list, add, edit delete

Package actions

Views
- GET
- POST
- PUT
- DELETE

- create, edit, delete package
- tasks
- add tasks, levels
- update

Course actions

- add packages
- sort packages
- add / invite students
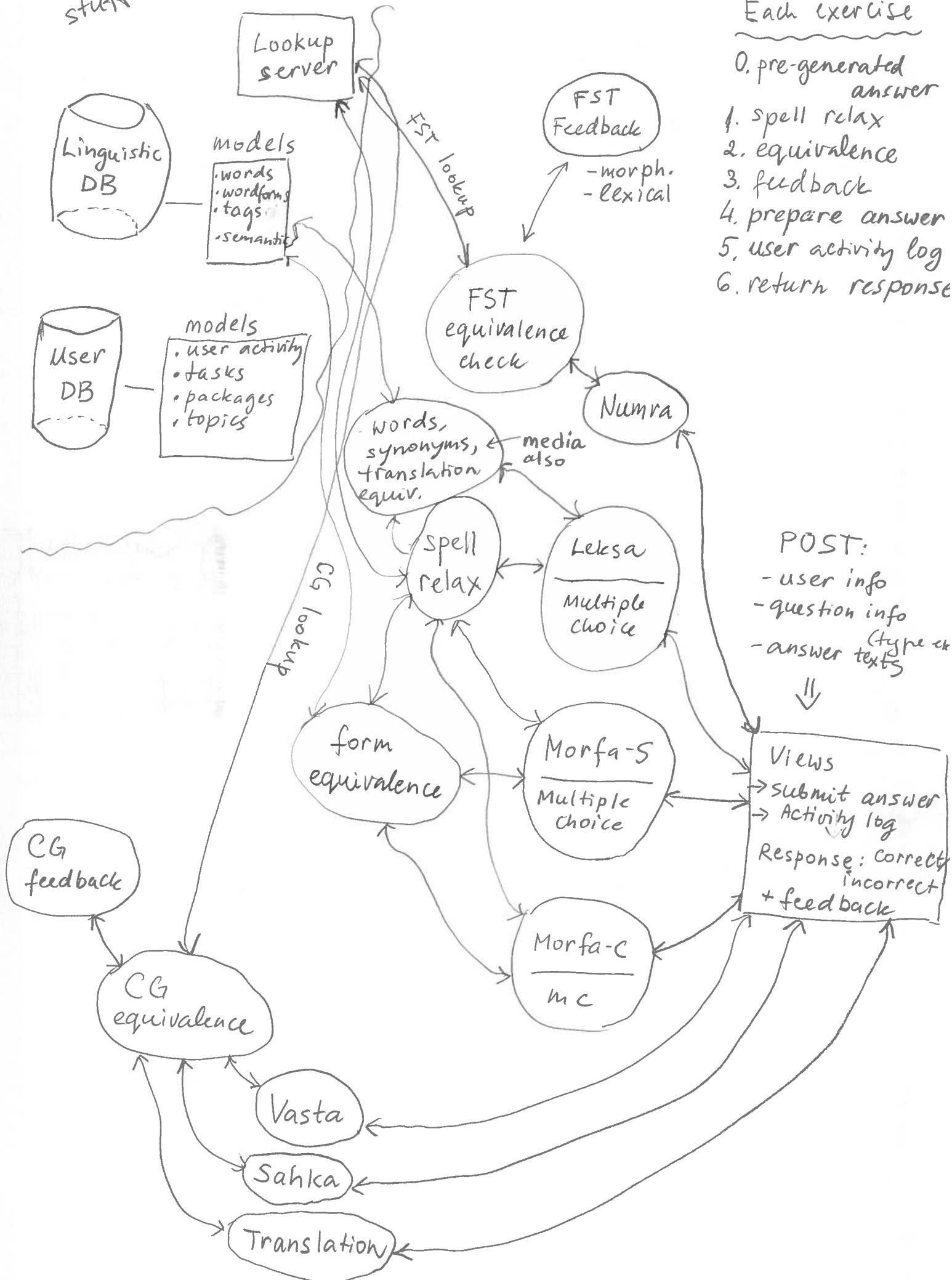- look at stats / learning evaluations
- suggestions for improvements

Course / views

Answer checking (validation)

outside stuff

Lookup server

Linguistic DB

models
- words
- wordforms
- tags
- semantics

User DB

models
- user activity
- tasks
- packages
- topics

FST Feedback
- morph.
- lexical

FST equivalence check

FST lookup

CG lookup

words, synonyms, & translation equiv.

media also

Numra

spell relax

Leksa / Multiple choice

form equivalence

Morfa-S / Multiple choice

Morfa-C / m c

CG feedback

CG equivalence

Vasta

Sahka

Translation

Each exercise

0. pre-generated answer
1. spell relax
2. equivalence
3. feedback
4. prepare answer
5. user activity log
6. return response

POST:
- user info
- question info
- answer texts (type ch

Views
→ submit answer
→ Activity log
Response: correct incorrect
+ feedback

Exercise generation backend

Outside stuff

Lookup server

— generate wordforms →

Numra
- get words or numbers
- generate Q/A morph.

Linguistic DB

Models
- words
- wordforms
- tags, tagsets
- semantics

relevant words
S.R.S.

↑ user task type

Morfa-S
- get words
- determine Q/A morph.

User DB

Models
. tasks
. user tracking progressions
. (packages, topics)

Media (audio, images)

user task type

return bag of words

Leksa
- get words
- determine Q/A morph. + language, media

Views
- check answer

Views
- get exercise

relevant wordforms

[wordforms]
[wordforms]
[wordforms]

Sentence generation

[words]

Morfa-C
- get words
- get Q/A templates

[wordforms + tasks]

Vasta

relevant templates

user progress info

↑
GET
- exercise game type
- exercise format (text → text,) etc.
- user/session
- package ?

User interaction backend

Tables:
- logs
- tasks
- package
- survey
- test/eval.
- suggestions

User DB

models → **User tracking** — **Views** ← **Exercise gen. + answers' check**

Linguistic conf.

Linguistic DB

Lexicon

models →
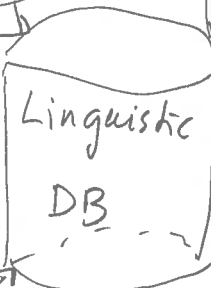
Learning Packages

Topics

Tests (Eval.)

- create package
- create task
- look at linguistic data
- determine topics from linguistic stuff

Package + topics Views
- Create
- Read
- Updat
- Delete

User auth.
- log in, create user
- Google Auth. etc.

Views

Instructor management
- courses
- add packages to course, etc.

Views

Learning statistics
- User views progress
- calculate stats

Views — Read

Suggestions
- student → instructor/linguist
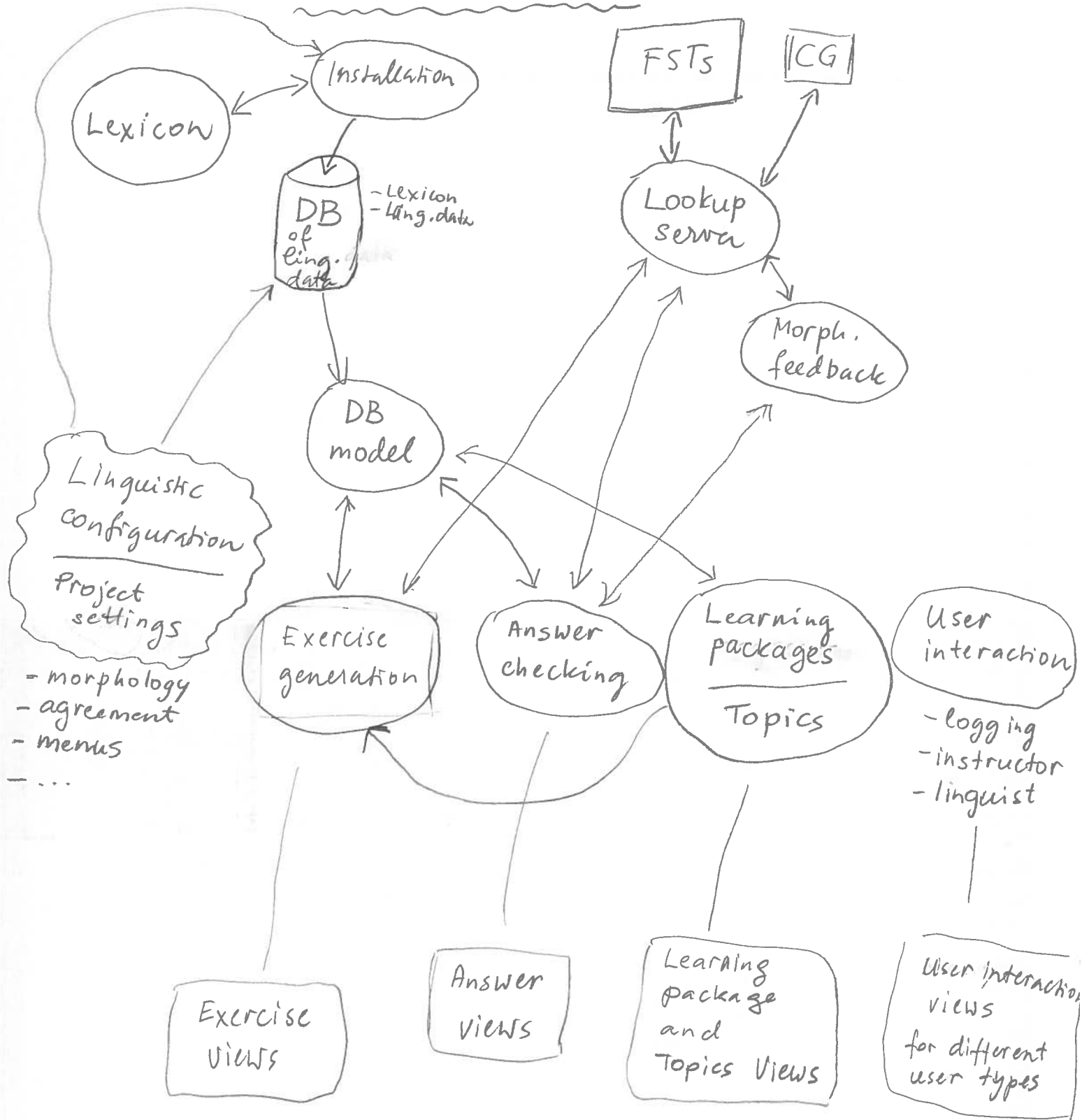- instructor → linguist
- ⊘ generate e-mail

Views
① student
- create
② instructor/ linguist
- create
- read

Backend overview

Lexicon

Installation

FSTs

CG

DB of ling. data — Lexicon — ling. data

Lookup server

Morph. feedback

DB model

Linguistic configuration
___
Project settings

- morphology
- agreement
- menus
- ...

Exercise generation

Answer checking

Learning packages
___
Topics

User interaction

- logging
- instructor
- linguist

Exercise views

Answer views

Learning package and Topics views

User interaction views for different user types

Frontend

Front page   What is this?

Oahpa! | About | & User

[4] Interface language select

Learn | Topics

→ go to practice place names (inflection, vocabulary,

→ go to orthography practice

→ go to practice illative

References | Giellatekno lings

Oahpa! | & User

Are you following a course?

Package A
. . . . B
. . . . C

Learning package A

Oahpa! | & User | [List]

① Greetings   Q: Good morning.
② . . . . .
③ . — . .   _____
④ . — . . .
                    |Fill in the answer

Progress %

List of words. What I am going to learn in this package?

First exercise in package A

Front page

Page of Topics

| Oahpa! | & User |

o Verb
  • practice present Sg. P1

o Nouns
  • practice place names
  • practice illative
  • orthography
  . . .

Round complete

| Oahpa! | & User |

Great!

Stats   Next
             round →

Grammar | & User

| Oahpa! | & User |

Karasjok

A: _____

answer feedback

⊥ ——————○—————— 100

- Groups of 10
  questions
  one by one

- Mixed
  exercises

- Conditional
  buttons
  morph.
  (submit, feedback)

Potentially 3-level
feedback