PDF FACTORY

Your ultimate solution to pdf files

Outline

- Overview
- UI design philosophy
- Architecture

What is PDF Factory?

- A GUI front-end to PDFJam
- Helps in modifying/manipulating PDF files

Features

- Opening/previewing pages of a PDF file
- Cut/Copy/Paste/Delete
- Rotate pages
- N-up/2 sides offset
- File merging
- Works across multiple files

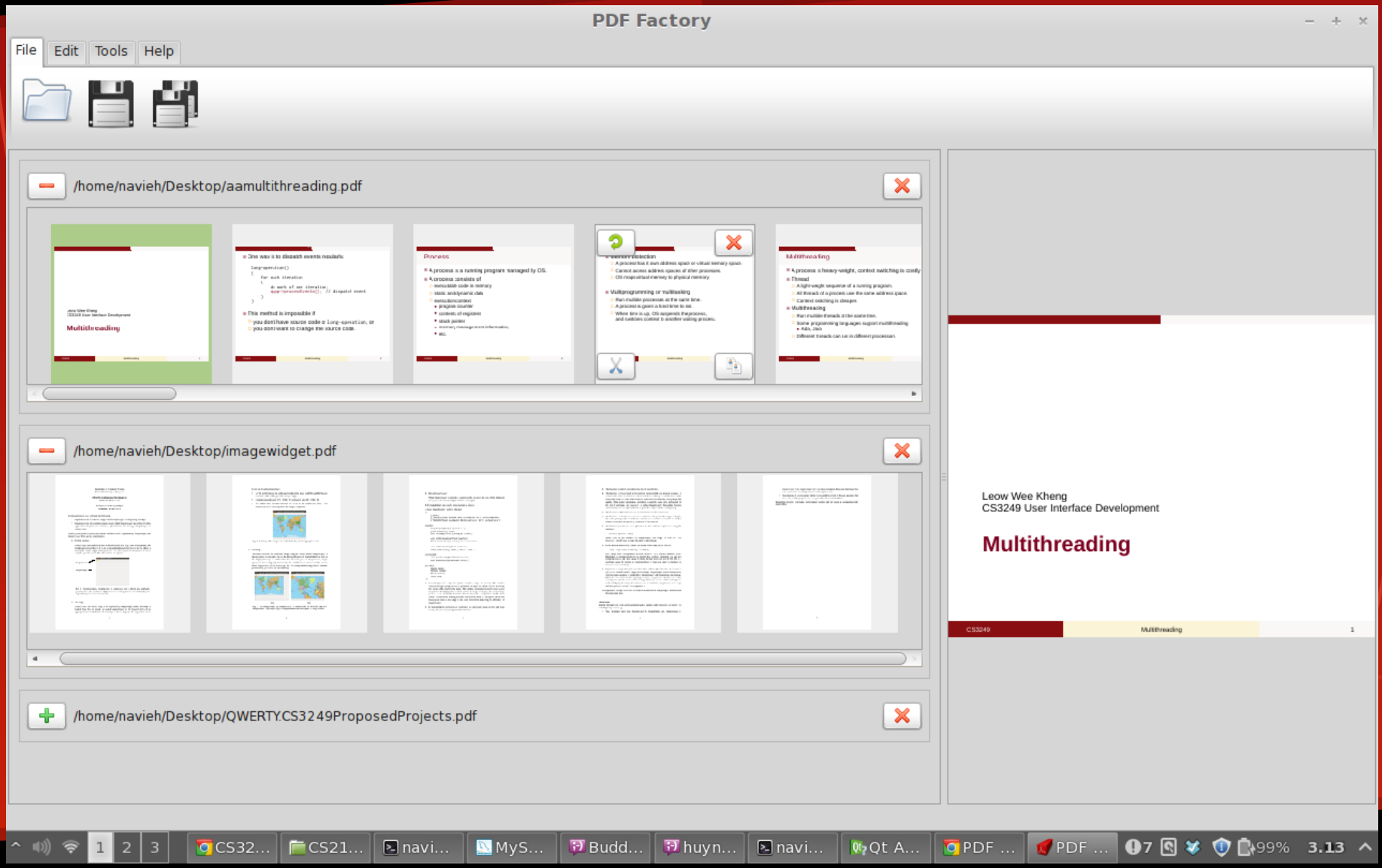
Demo

UI Design philosophy

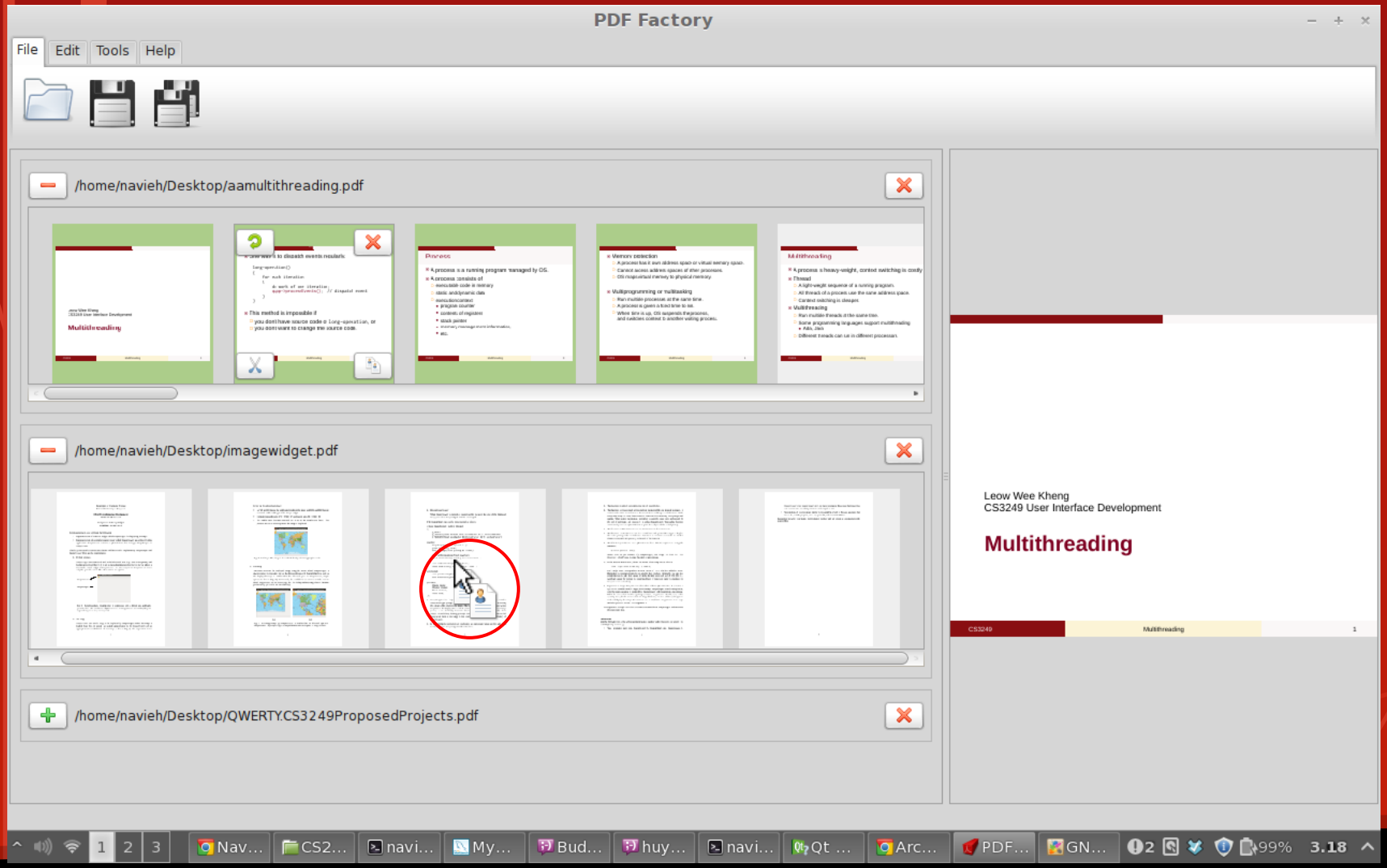
Goals:

- Intuitive, mostly depends on mouse clicks
- Easy access across multiple files
- Compensate for PDFJam's low speed through queuing commands

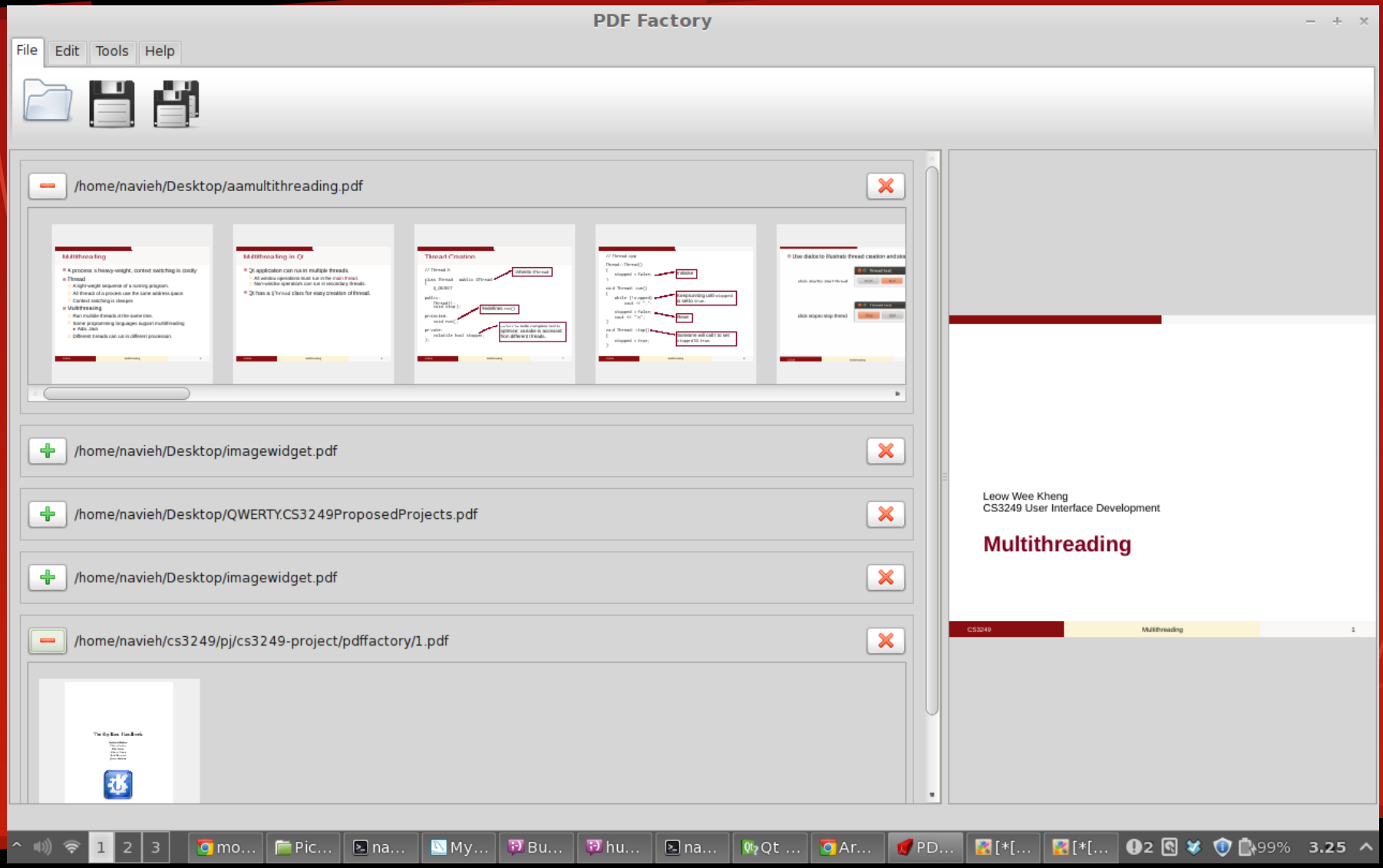
Focuses on mouse clicks



Focuses on mouse clicks



Easy multiple files access



Time compensation for PDFJam

- PDFJam command line
- no visible intermediate results
- needs to wait before executing next step

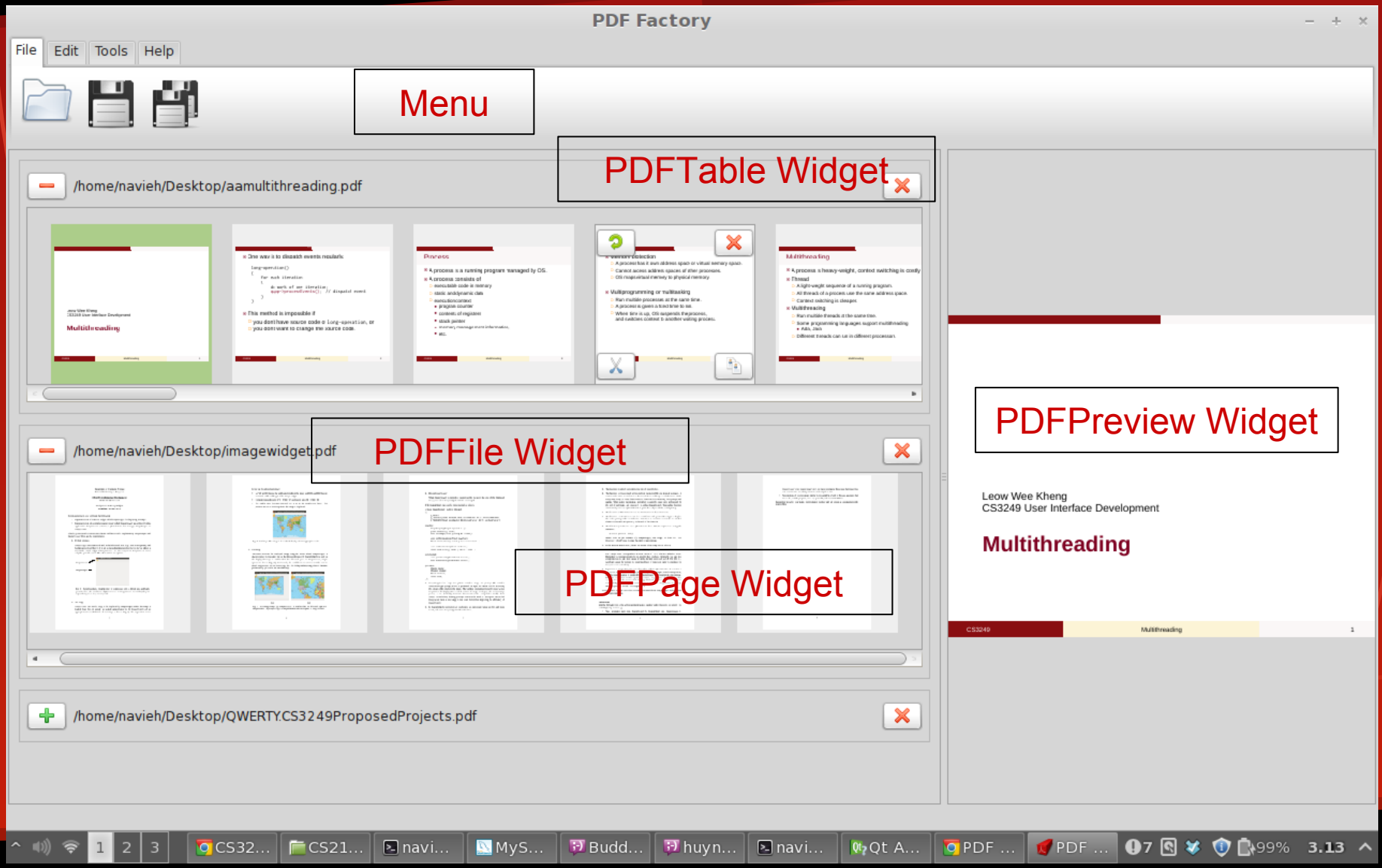
System design

- Model-View-Controller Architecture
  - Separation of concerns
  - Decoupling between components

System design

- Challenges
  - Rendering pdf takes time:
    do it in another thread!
  - PDF renderer lib is not thread-safe:
    mutex - save some memory, slower to load
    creating multiple objects - one for each thread,
    sacrifice memory for performance
  - need to generate multiple PDFJam commands -> executing all commands at the export step costs some time...
    again, as user is editing, do it in another thread.

Widgets


PDF Factory
File
Edit
Tools
Help
Menu
PDFTable Widget
/home/navieh/Desktop/aamultithreading.pdf
PDFFile Widget
/home/navieh/Desktop/imagewidget.pdf
PDFPage Widget
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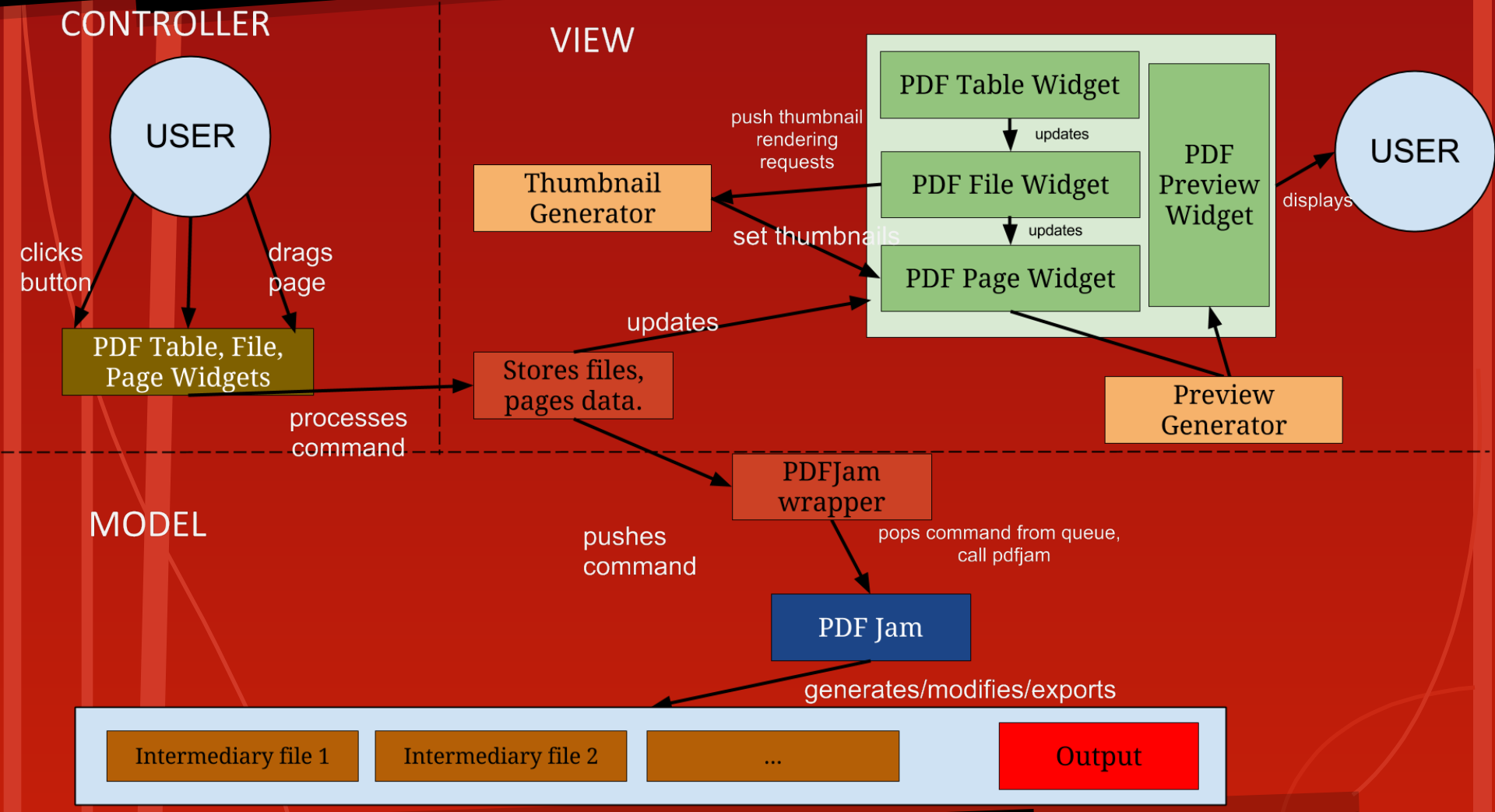
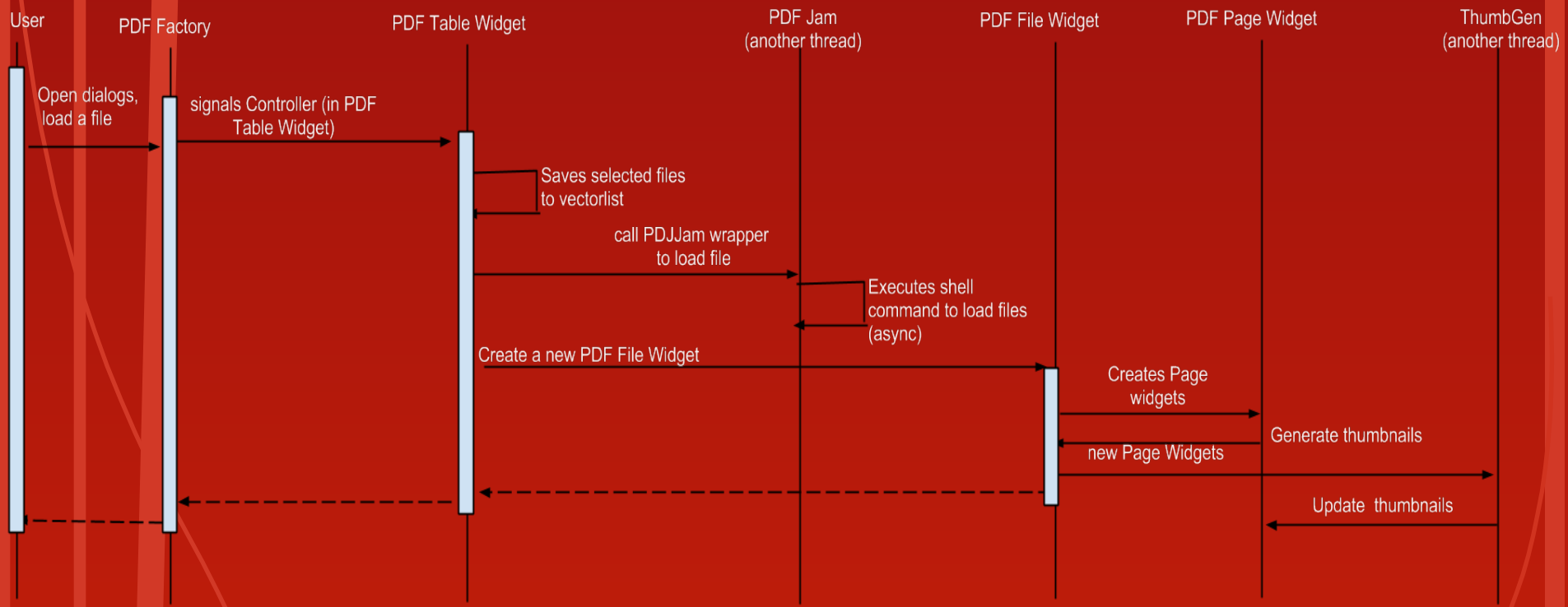
PDFPreview Widget
Leow Wee Kheng
CS3249 User Interface Development
Multithreading

Architecture



Sequence Diagram



Q & A