

Student Smart Printing Service (SSPS)

- printer: ID, brand, model, desc, locationId
- location: campus, building, room

Actor:

Student

Service Officer

Report System | Logging System | Print Server

BKPAY | SSD

Features:

- Print a doc. — [specify printing properties]
- Upload a doc file
- View uploaded doc file
- View print history
- Buy Printing Pages
- View page balance.
- + Logging — student's actions.

View Print History (All) — student's printers

manages printers (view, add, enable, disable..)

manage configurations

report printing using — month, year
— generate
— view

Functional Requirement No. — FR, NFR

FR 1: A student shall be able to print a document.

Desc: To be able to print a document, students first need to upload the document to HEMUT-SSPS system. After the document is successfully uploaded, student can select the printer & setup the print configuration (if need). The system displays a successful print msg after printing is complete.

- 1.1. upload doc file.
- 1.2. view doc file (uploaded)
- 1.3. select printer.
- 1.4. setup print configuration.

Non-Func Reqs:

- The permitted file type are limited by SSPS. Ex: docx, pdf, ...
- the upload file size should be $\leq 3\text{MB}$?
- _____ speed within 3-5 seconds.

Use case Diagram



Actor & Success cases

| Actor | Name | Desc |
|-------|-----------------|---------------------------------|
| 01 | Student | |
| 02 | Service Officer | |
| 03 | SSO | |
| 04 | BKPAY | |
| 05 | System | Report System & Logging System. |
| 06 | Print Server | |

| Use Case | Desc |
|-----------------------|------|
| Login | |
| print a document | |
| view printing history | |
| | |

The Layered Architecture of SSPS

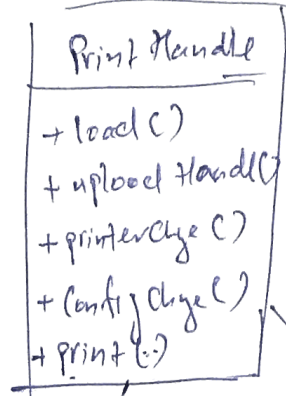
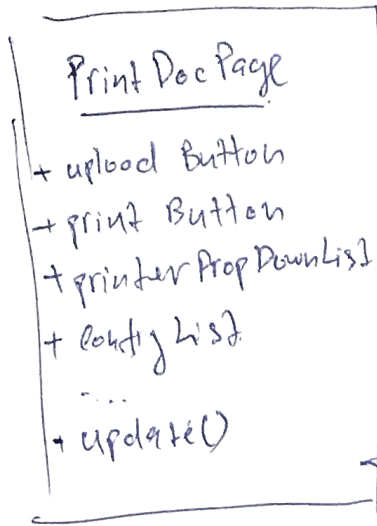


Four Layers

- + Top layer: are web-based user interface and mobile-based user interfaces
- + Second layer: provides the UI functionality that is delivered through the web-browser or mobile - Allow user: login & rolechecking,
- + Third layer: implement the functionality of the system and provides components that implement
 - system security
 - printing - upload, print docs
 - report generator - create management reports
 - printer - create, enable/disable printers . . .
 - payment - control configuration
 - logging - log actions
- + Lowest layer: provides trans management & persistent data storage

<<View>>

<<controller>>

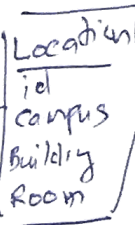
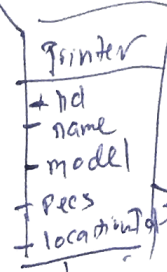


execute event

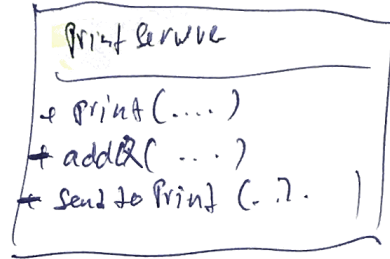
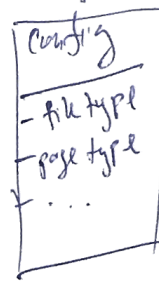
update View

update model

<<model>>



getter / setter



Class Diagram
Module Print Management

Print Doc Page : - - -

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Print Handle

+ load(): for initial page loading...
+ print (doc, client, print-setting, printer-id)
 ← page size
 ← no. of copies
 ← printer-id

Test Case: For Print a Document

Test Case #1: Display Print Doc Page - Successfully.

+ Test Cases:

+ Pre conditions: logged, have role: student

+ Actions:
1. student click on "Print Doc Page" on main menu
2. System display page includes: get data:
 - printer - list
 - config - list

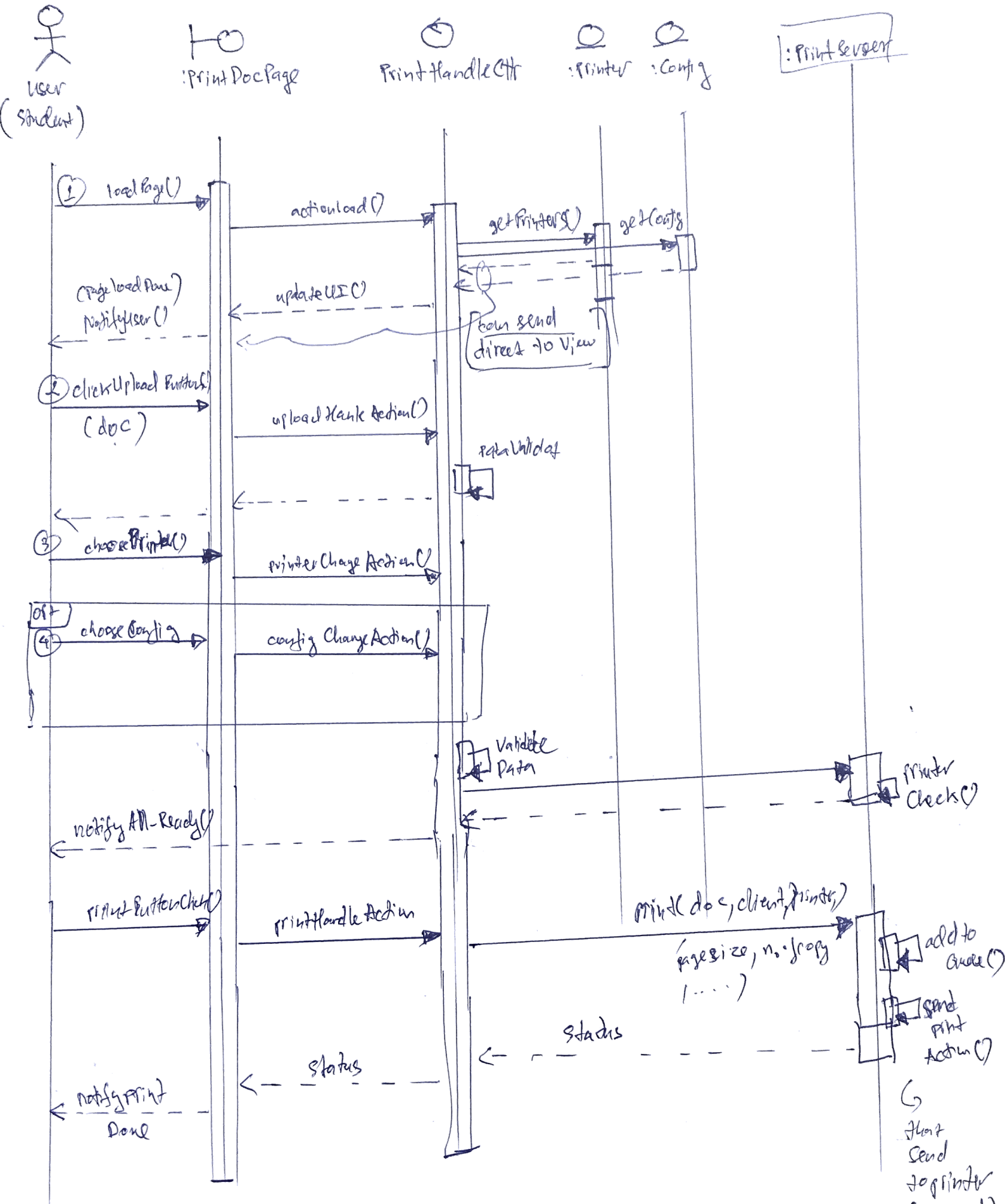
+ Input: No printer founded

Expected Output: system display Print Doc Page contains upload file & list of Print

#02 upload Doc File Successfully

#03

Sequence Diagram



1. load Page :
2. Upload document
3. choose Printers
4. choose Config (optional)

5. Print :