

# AU Room Management System



มหาวิทยาลัยอัสสัมชัญ  
ASSUMPTION UNIVERSITY  
of THAILAND



VINCENT MARY  
SCHOOL of SCIENCE and  
TECHNOLOGY

## Our Team

Grid Kornsutatipkul 6013732 (Jai)

Sokvathara Lin 6018002 (Lex)

Thanathas Chawengvorakul 6014586 (Oat)

# What is ARMS ?

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- AU Rooms Management System (ARMS)
- Allocate examination seats and rooms
- With existing subjects and students

## Why we need ARMS?

**1. Paper-based  
Arrangement  
Process**

2. Restart the  
Whole Process  
Every Examination  
Periods

3. Unable to Evaluate  
the Performance

4. Human Errors

6/3/19

# Room and its capacity

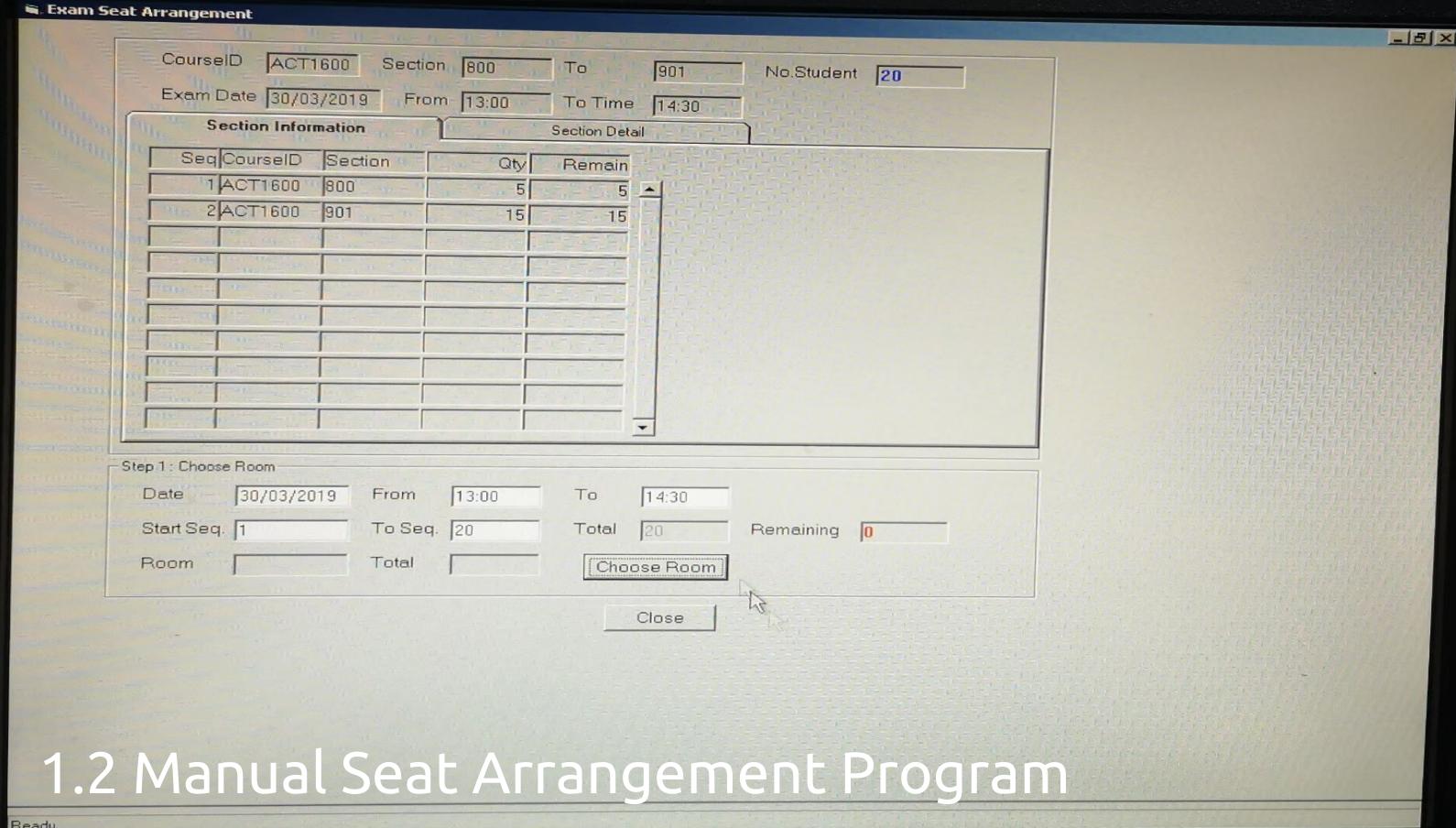
Page 1 of 3

SAT., APRIL 27, 2019		SECTION	ROOM	TOTAL	0	SG503	SM509	SM510	SR501	SG203	SG204	SG205	SG206	SG207	SG208	SG209	SG214	SG215	SG216	SG217	SG218	SG219	SG302	SG303	SG304	SG305	SG306	SG307	SG308	SG331	SG332	SG333	SG334	SG335	
09.00 - 10.00				6496	0	280	280	280	280	30	30	30	30	30	30	30	30	30	30	30	45	45	30	30	30	30	30	30	30	30	30	30			
FIN 2700 MONEY, BANKING AND FIN MARKETS	401-415, 800		206	206	0	0	0	0	0	124	124	124	124	103	120	89	67	109	124	124	152	114	0	0	0	0	0	0	0	0	0	0			
FIN 2201 PRINCIPLES OF FINANCE	401-415, 800		495	495	0																														
10.30 - 11.30					0																														
FIN 3701 CORPORATE FINANCE	401-416		602-	602	21																														
12.00 - 13.00					0																														
CN 1400 INTRODUCTION TO CHINESE					34																														
CN 1401 CHINESE I	471-472				36	36																													
CN 2401 CHINESE II	471-474				71	71																													
CN 2402 CHINESE III	471				20	30																													
CN 3403 CHINESE IV	471-473				64	64																													
EN 4256 BUSINESS RESEARCH WRITING	471				15	15																													
FR 0500 FRENCH FOR BEGINNERS I (Huamak)	471-478				229	229																													
FR 0500 FRENCH FOR BEGINNERS I	81				22	0																													
IBM 2201 INTERNATIONAL BUSINESS ENVIRONMENT	402-403				23	23																													
IBM 2201/2702 INTERNATIONAL BUS ENVIRONMENT(Huamak)	401-411,800				516	516																													
	901				17	0																													
13.30-14.30					0																														
CN 0400 CHINESE FOR BEGINNERS I	401-406				122	122																													
CN 0401 CHINESE FOR BEGINNERS II	401				26	26																													
FIN 4812 INTERNATIONAL FINANCE	401-403				136	136																													
PROCTOR = 34					0																														
DIRECTOR = 3					0																														
STAND BY = 5					0																														
					0																														

Subjects with sections and its students amount

Allocated seats

1.1 Rooms and Seat Allocation Paper



## 1.2 Manual Seat Arrangement Program

Ready

DELL

**Question Paper**

Date : 30/03/2019

Time : 09:00-10:30

Subject : SA1201

Total : 30

Room : SG203

**Question Paper**

Date : 30/03/2019

Time : 09:00-10:30

Subject : SA1201

Total : 30

Room : SG204

# 1.3 Result

**Question Paper**

Date : 30/03/2019

**Question Paper**

Date : 30/03/2019

Time : 09:00-10:30

Subject : SA1201

Total : 30

Room : SG207

**Question Paper**

Date : 30/03/2019

Time : 09:00-10:30

Subject : SA1201

Total : 30

Room : SG208

**Question Paper**

Date : 30/03/2019

		AS OF : 26/03/2019 SEMESTER : 2018/2 EXAM DATE : 30/03/2019 TIME : 11:00 - 12:30 EXAM TYPE : QUIZZ			ASSUMPTION UNIVERSITY EXAMINATION SEATING REPORT *** BG1301 ***		R.1
SEQ	ROOM	ADM.NO.	NAME	SECTION	SEAT	SIGNATURE	
1	SG203	5610378	MARISA	H.	401	1/1	
2	SG203	5617340	ASADAWUTH	K.	401	1/2	
3	SG203	5617687	PEERAKARN	P.	401	1/3	
4	SG203	5617947	PAPICHRAYA	W.	401	1/4	
5	SG203	5647538	SUPATTRA	K.	401	1/5	
6	SG203	5647977	JINMIAN	W.	401	1/6	
7	SG203	5711245	PLOYLADA	L.	401	2/1	
8	SG203	5711315	NATPATKAWAT	T.	401	2/2	
9	SG203	5711410	WISANU	C.	401	2/3	
10	SG203	5712248	PINKANOK	K.	401	2/4	
11	SG203	5712908	WANCHALERM	T.	401	2/5	
12	SG203	5713942	NATTNANICHA	B.	401	2/6	
13	SG203	5714708	WORAPAN	M.	401	3/1	
14	SG203	5715122	AARON PANSIAM	W.	401	3/2	
15	SG203	5715251	THANANOP	P.	401	3/3	
16	SG203	5715545	MANA	C.	401	3/4	
17	SG203	5717407	MONTAKARN	M.	401	3/5	
18	SG203	5717483	THANAPORN	C.	401	3/6	
19	SG203	5717517	YANEE	M.	401	4/1	
20	SG203	5717526	CHAINRURUN	N.	401	4/2	
21	SG203	5717686	KITTIPHOP	S.	401	4/3	
22	SG203	5717718	VEERINRADA	I.	401	4/4	
23	SG203	5737650	DHANAKORN	S.	401	4/5	
24	SG203	5737692	SURASAK	N.	401	4/6	

## Why we need ARMS?

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Arrangement  
Process

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Process Every  
Examination Period**

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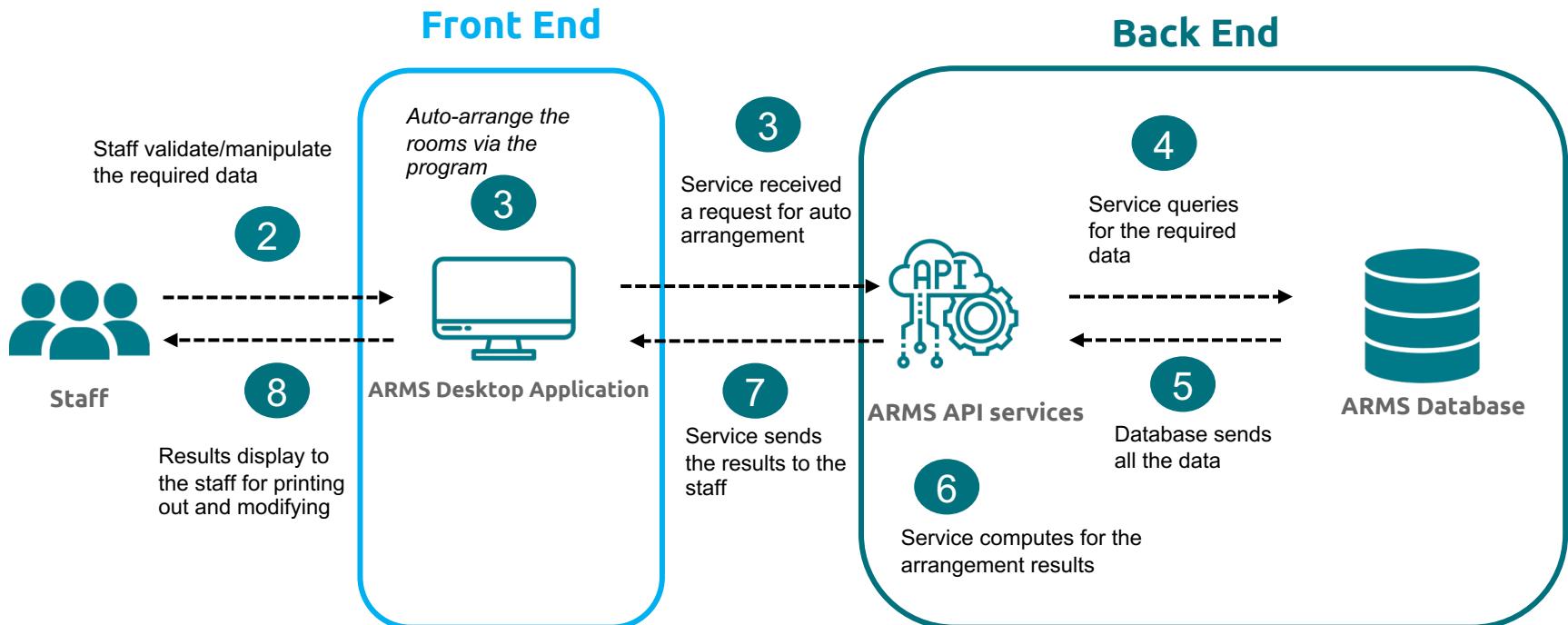
1. Paper-Based  
Arrangement  
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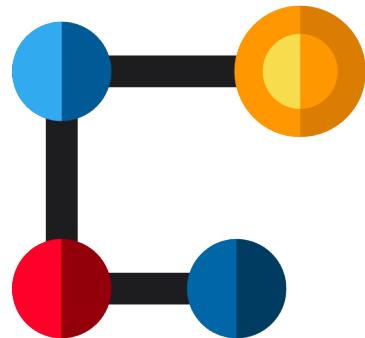
3. Unable to Evaluate  
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**4. Human Errors**

# System Diagram



# System Main Functions



1. Manual Assignment

2. Auto Assignment

# How Does the Manual Assignment Process?

ALL FACULTY      ALL DEPARTMENT

CS4402 SELECTED TOPIC IN OBJECT ORIENTED CONCEPTS

Examination on 12/12/2017 09:00 - 12:00      Total Section 1 SECTION      Total Student 13 STUDENT

Campus

Suvarnabhumi Campus: 13 Student

ALL CAMPUS      ALL BUILDING      ALL FLOOR

SELECT ROOM      VMS401 X

Accumulative Seat

20 Seat

Total Seat 20 SEAT

**Save**      **Cancel**

# How Does the Auto Assignment Process?

1. User need to select the semester and term of examination
2. User needs to do a confirmation to activate an Auto Assignment
3. Then the frontend system will trigger the Web API Service

# System Features

1. Browse Student's Examination Schedule
2. Check the Conflict Student List
3. Opt Actionable Reports of Assigned Courses
4. Can Dissolve All Assigned Courses
5. View Examination Rooms Throughout Time Slots
6. Can Print All Examination Seating Reports Instantly

# Browse Student's Examination Schedule

Browse

Schedule of Examination Student

Semester: 1/2017 Session: Midterm Search

Student Code: 5514032 Search Student

Student Name: Student670 Student670, and Student Code: 5514032. Examination Schedule in Midterm - 1/2017

Show 10 entries Search:

↓↑	↑↓	Course	↑↓	Section	↑↓	Examination Seat	↑↓	Examination Date	↑↓	Examination Time	↑↓
1		BG2001 ENGLISH IV		440		13 / 4		02/10/2017		09:00 - 11:00	
2		HTM4403 TOUR GUIDING AND OPERATION IN PRACTICE		401		2 / 1		02/10/2017		09:00 - 11:00	
3		MGT3907 BUSINESS COMMUNICATION		420		2 / 2		02/10/2017		09:00 - 11:00	

Showing 1 to 3 of 3 entries

Previous 1 Next

# Check the Conflict Student List

Report of Conflict Student in Midterm - 1/2017								
<a href="#">Main</a>								
Show 10 entries								
↓↑	↑↓	Student Code	↑↓	First Name	↑↓	Last Name	↑↓	Action
1		5518157		Student773		Student773	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
2		5414228		Student306		Student306	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
3		5611003		Student1368		Student1368	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
4		5610333		Student1191		Student1191	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
5		5514032		Student670		Student670	3	02/10/2017 09:00 - 11:00 <a href="#">i</a>
6		5455241		Student429		Student429	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
7		5613710		Student1832		Student1832	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
8		5616358		Student2087		Student2087	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
9		5512465		Student606		Student606	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
10		5511618		Student562		Student562	2	02/10/2017 09:00 - 11:00 <a href="#">i</a>
Showing 1 to 10 of 271 entries								
<a href="#">Previous</a> <a href="#">1</a> <a href="#">2</a> <a href="#">3</a> <a href="#">4</a> <a href="#">5</a> ... <a href="#">28</a> <a href="#">Next</a>								

# Opt Actionable Reports of Assigned Courses

Examination Course ACT3602. Exam on 04/10/2017 09:00 - 11:00											
< Main											
Show 10 entries Search:											
↓↑	↑↓	Building	↑↓	Room	↑↓	Total Seat	↑↓	Total Section	↑↓	Total Student	↑↓
1		VMS Building		VMS401		20		1		20	
2		SM		SM204		30		1		30	
3		SM		SM205		30		2		30	
4		SM		SM206		30		1		30	
5		SM		SM207		30		2		20	
6		SM		SM208		30		2		30	
7		SM		SM209		30		1		30	
8		SM		SM210		30		1		22	
Showing 1 to 8 of 8 entries											
Previous <span style="background-color: #ccc; padding: 2px;">1</span> Next											

# Can Dissolve All Assigned Courses

Faculty      Department      Course

ALL FACULTY    ALL DEPARTMENT    COURSE CODE

Reset Assign    Auto Assign

Show 10 entries    Search:

No data available in table

Showing 0 to 0 of 0 entries

Previous    Next

Do you want to dissolve all assigned examination courses? x

Cancel OK

# View Examination Rooms Throughout Time Slots

 Report of Examination Room

Examination Date  Examination Time

Campus	Building	Floor	Room	Total Seat	Total Section	Total Student	Action	Created On	Created By
ALL CAMPUS	ALL BUILDING	ALL FLOOR	ROOM NAME						
1	SM	SM204		30	2	30	<a href="#">i</a>	29/01/2020 05:57	User
2	SM	SM205		30	2	22	<a href="#">i</a>	29/01/2020 05:57	User
3	SM	SM206		30	2	30	<a href="#">i</a>	29/01/2020 05:57	User
4	SM	SM207		30	2	30	<a href="#">i</a>	29/01/2020 05:57	User
5	SM	SM208		30	1	30	<a href="#">i</a>	29/01/2020 05:57	User
6	SM	SM209		30	2	23	<a href="#">i</a>	29/01/2020 05:57	User
7	VMS Building	VMS401		20	1	20	<a href="#">i</a>	29/01/2020 05:57	User
8	A Building	A101		30	2	27	<a href="#">i</a>	29/01/2020 05:57	User

Show 10 entries

Showing 1 to 8 of 8 entries

# Can Print All Examination Seating Reports Instantly

**ASSUMPTION UNIVERSITY**  
**EXAMINATION SEATING REPORT**

**SEMESTER: 2/2017**  
**EXAMINATION DATE: 30/3/2018**  
**TIME: 09:00 - 12:00**  
**EXAMINATION TYPE: FINAL**

SEQ	ROOM	STUDENT CODE	STUDENT NAME	SECTION	SEAT	SIGNATURE
1	SG203	5610378	MARIZA H.	401	1/1	
2	SG203	5610379	PEERAKARN P.	401	1/2	
3	SG203	5610380	PARPICHAYA W.	401	1/3	
4	SG203	5610381	JINMIAN W.	401	1/4	
5	SG203	5610382	PLOYLADA L.	401	2/1	
6	SG203	5610383	NATPRAKTWAT T.	401	2/2	
7	SG203	5610384	MARIZA H.	401	2/3	
8	SG203	5610385	MARIZA H.	401	2/4	

# Requirements

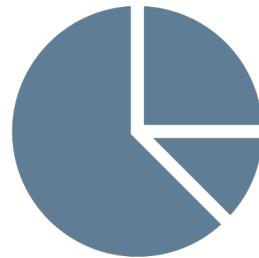
Through our Information Gathering, we have collected requirements that they want and **NEED**.

We can group them into three categories:

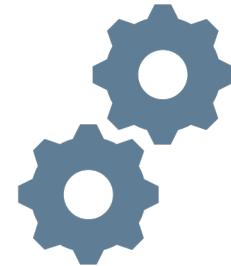
1. Working Efficiency Purpose



2. Resources Control Purpose



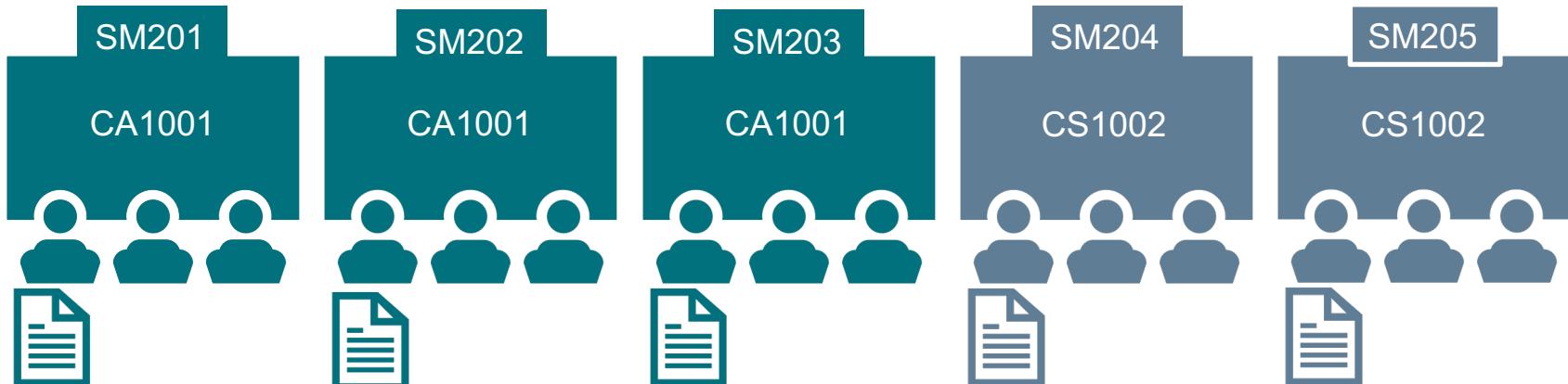
3. Other Purpose



# Working Efficiency

Sections from the same course should be next to each other

- More convenient for staff to distribute and collect examination paper
- Prevent confusions



# Resources Control

End with result that use examination rooms as less as possible

Minimize buildings usage as well

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End with result that uses examination rooms as less as possible

Minimize buildings usage as well

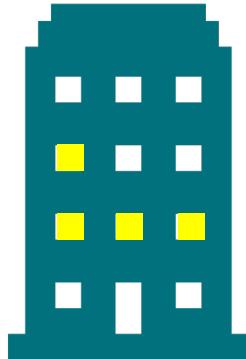


# Resources Control

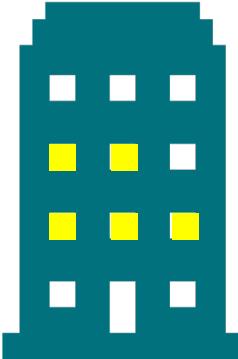
End with result that use examination rooms as less as possible

- Minimize buildings usage as well

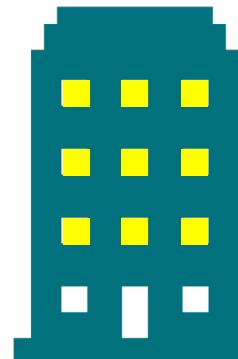
4 rooms



5 rooms



9 rooms



# Other Purpose

Student must take examination on campus that they enrolled that course

According to the requirement, it is possible to see examination rooms with more than one section or course inside.

We normally see 3 cases:

1. Room contains only one section
2. Room contains only two sections
3. Room contains more than two sections

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 Student must take examination on campus that they enrolled that course

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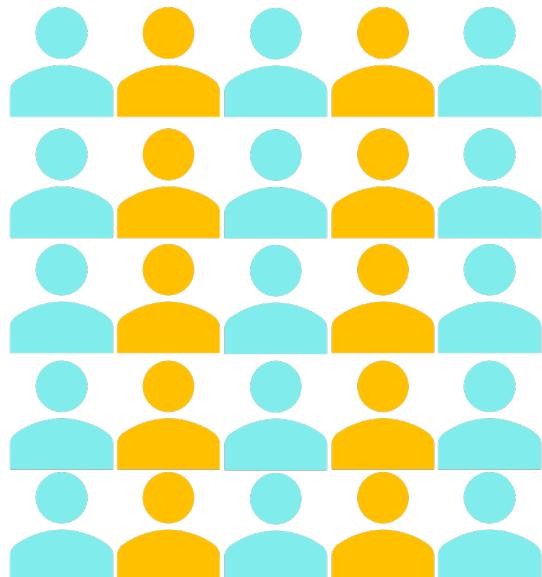
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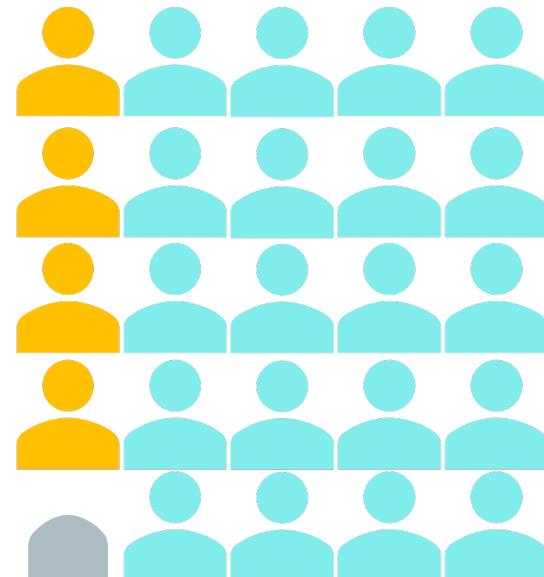
ACT1001 : 15 students

CS1001 : 10 students



ACT1001 : 20 students

CS1001 : 4 students



\*\*Assumes this room has 25 examination seats

# Assigning Process Diagram



Retrieve data from database



Format data



Assign sections and courses to examination rooms

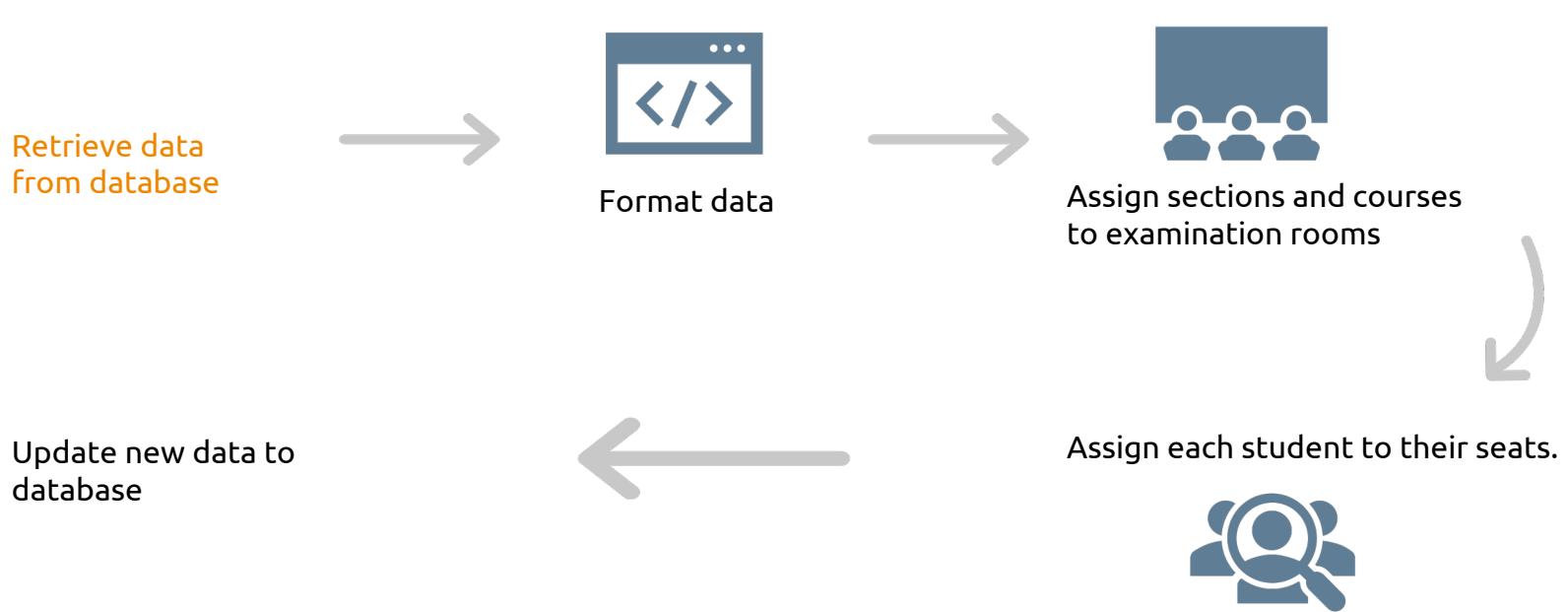
Update new data to database



Assign each student to their seats.



# Assigning Process Diagram



# Assigning Process Diagram



Retrieve data from database



Format data



Assign sections and courses to examination rooms

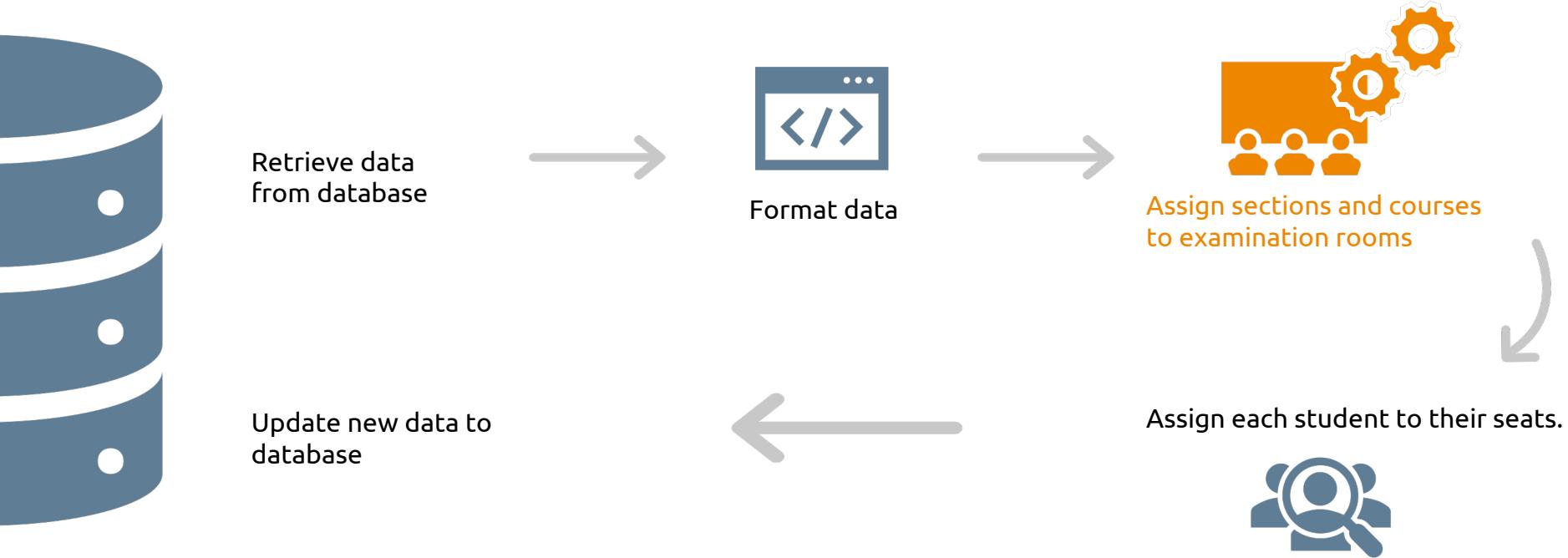
Update new data to database



Assign each student to their seats.

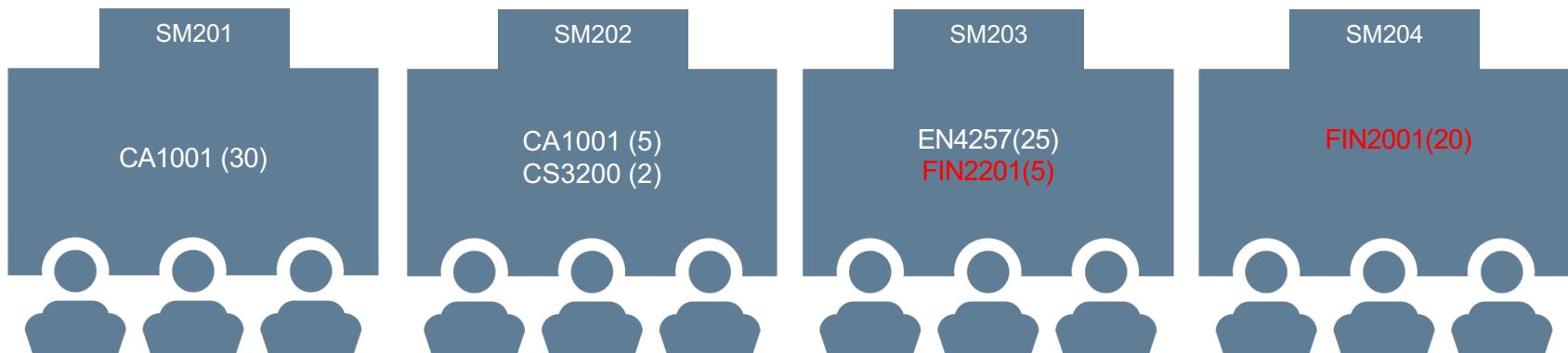


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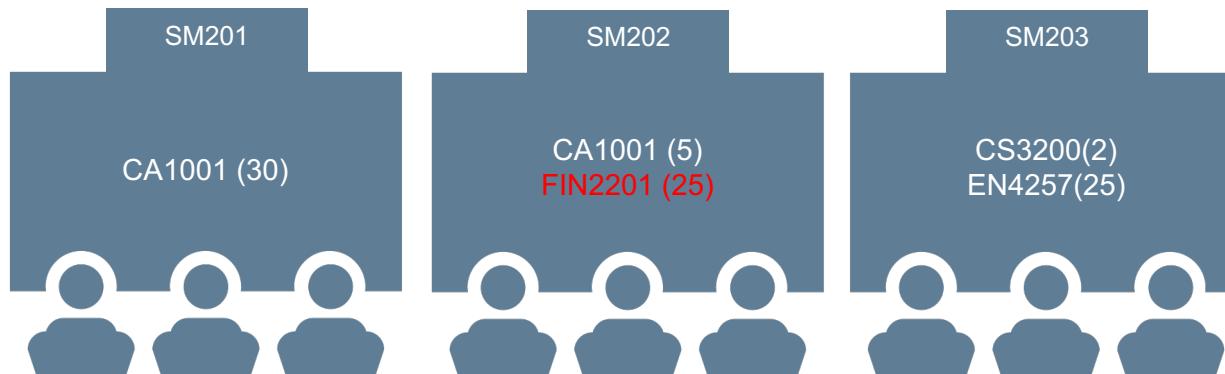


Course	Number of Student
CA1001	35
CS3200	2
EN4257	25
FIN2210	25

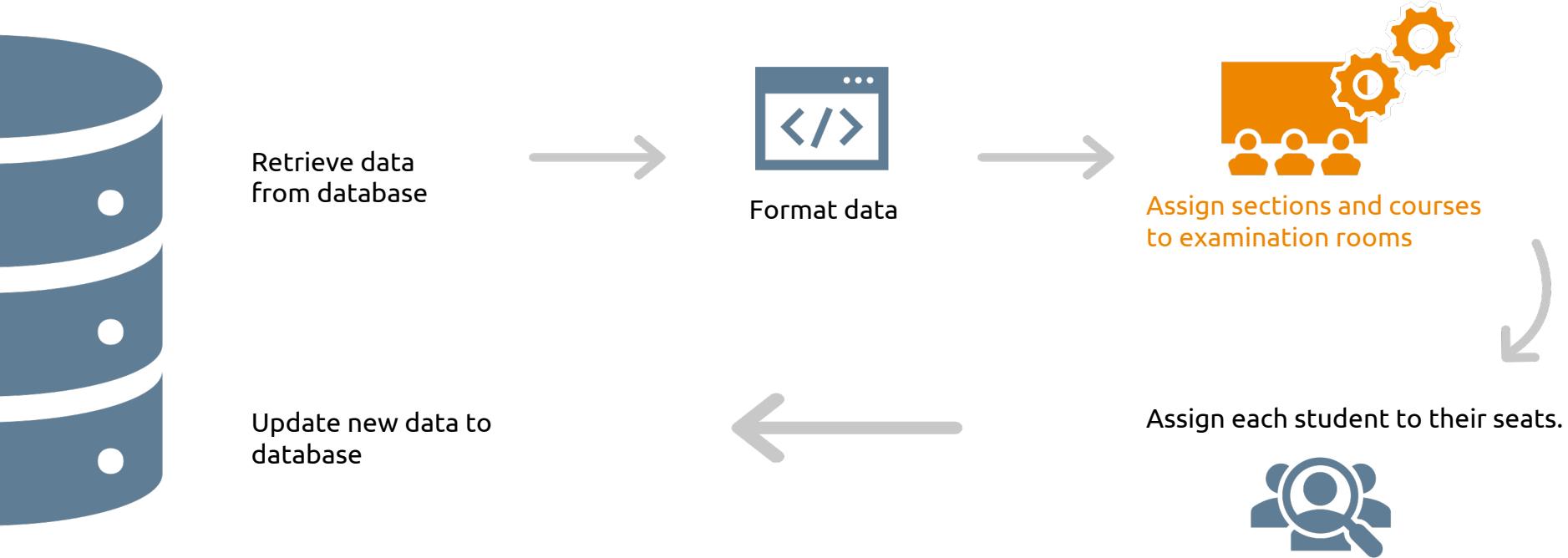
Course	Number of Student
CA1001	35
CS3200	2
EN4257	25
<b>FIN2210</b>	<b>25</b>



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CA1001	35
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# Assigning Process Diagram



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Retrieve data  
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# Assigning Process Diagram



Retrieve data from database



Format data



Assign sections and courses to examination rooms



Update new data to database



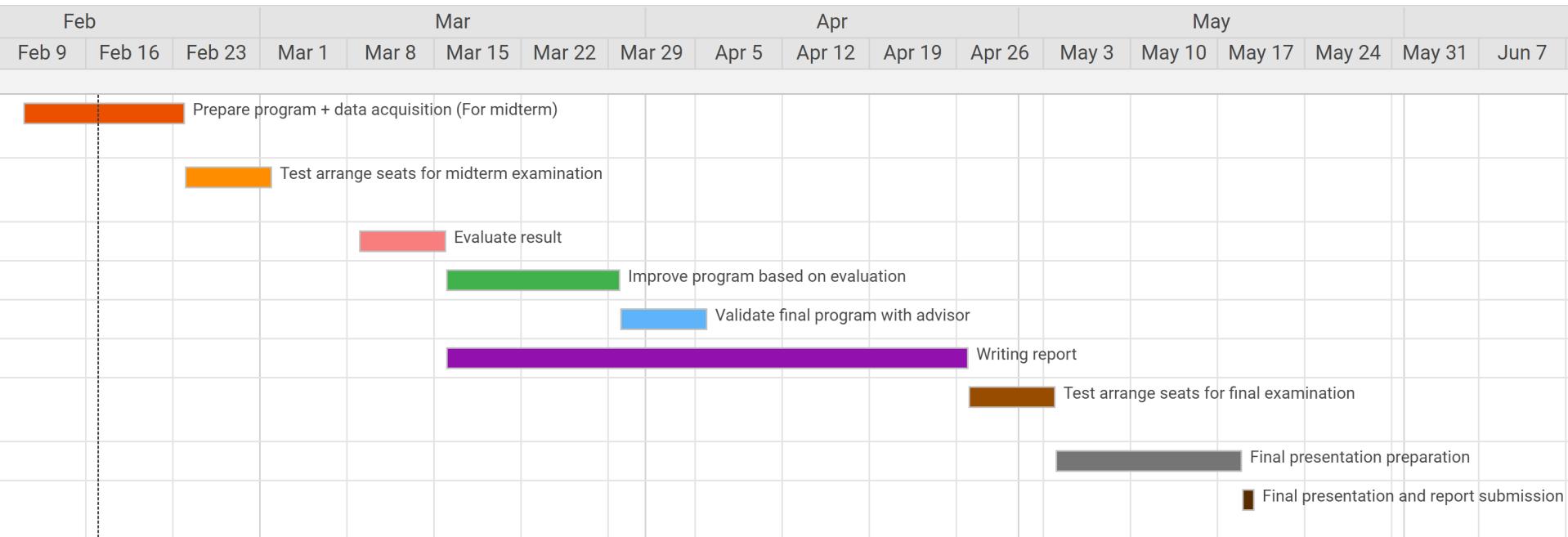
Assign each student to their seats.



# Benefits of the System

1. Efficiency
2. Redundancy
3. Perceptibility
4. Accuracy

# Development Plan



# THANK YOU!