

## Part I

### 1. Roles

- Customer
  - Unauthorized customer
  - Authorized customer
- Employee
  - Trainee
  - Senior
  - Manager

\*Part-time will have access role as Trainee

### 2. Services (Facilities)

I would like to partition zones for ease of access assigning

- Common facilities
  - Bathroom
  - Coffee service area
- Authorized customer facilities
  - Table and Chairs
- Unauthorized customer facilities
  - waiting chair
  - Front door
- Common employee facilities
  - Coffee service area (where staffs serve customer drinks)
  - Coffee making tools
  - Cashier + POS device
- Delicate employee facilities
  - Store room
  - Admin PC (monitor ERP, stock)

### 3. access resource

- Customer: every customer enter coffee shop are **Unauthorized customer** until register with **CU student card** or **entering registration form**. After the registration customer will become **Authorized customer** by getting authorized by using face recognition system for Chula member type or authorized by using **face recognition** + entrance fee charging for Non-Chula member type. **\*I assume coffee member type is separate from high-level security policy**
- Employee: every people occupying valid **(RFID) Employee badge** are **Trainee, Senior, Manager** depend on **Employee badge type**.

### 4. ACL

Use ACL by

- for customer side: putting poster/sign to identify which facilities are only for **Authorized customer**.
- for employee side: Put color-coded sign to identify accessibility for each employee type on facilities + on IT device require RFID on employee badge to authorize.

Role/facility group	Common facilities	Authorized customer facilities	Unauthorized customer facilities	Common employee facilities	Delicate employee facilities
<b>Customer</b>					
Unauthorized customer	-	-	U	-	-
Authorized customer	U	U	-	-	-
<b>Employee</b>					
Trainee	U/M	M	M	U	-
Senior	U/M	M	M	U/M	U
Manager	U/M	M	M	U/M	U/M
U = use					
M = maintenance/edit config					

## Part II

### 1. Roles(User)

- Academic
  - Student [S]
  - Graduated Student [S]
  - Instructor in charge of course [C]
  - Advisor in charge of student [S]
- Moderator
  - Registration staff of faculty [F]
  - Main Registration staff

\*[] is variable

### 2. Objects

- Course
- Request enroll entry
- Enroll entry
- Request withdraw/cancel entry
- Withdraw/cancel entry on
- Grade for student
- Academic Account
- GPAX/GPA report

### 3. Functions

- C/R/U/D for each objects

### 4.

Role/object	Course [C] for faculty [F]				Request enroll entry on course [C] in faculty [F] for student [S]				Enroll entry on course [C] in faculty [F] for student [S]				Request withdraw/cancel entry on course [C] in faculty [F] for student [S]				Withdraw/cancel entry on course [C] in faculty [F] for student [S]			
	C	R	U	D	C	R	U	D	C	R	U	D	C	R	U	D	C	R	U	D
<b>Academic</b>																				
Student [s] in faculty [f] in course [c]	-	any	-	-	F=f	S=s	-	S=s	-	S=s	-	-	F=f	S=s	-	S=s	-	S=s	-	-
Graduated Student [s]	-	any	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Instructor [c]	-	C=c	C=c	-	-	C=c	-	-	-	C=c	-	-	-	C=c	-	-	-	C=c	-	-
Advisor [s]	-	any	-	-	-	-	-	-	-	S=s	-	-	-	-	-	-	-	S=s	-	-
<b>Moderator</b>																				
Registration Staff [f]	F=f	F=f	-	F=f	-	F=f	-	-	F=f	F=f	-	F=f	F=f	F=f	-	F=f	-	F=f	-	-
Main Registration Staff	any	any	-	any	any	any	-	any	any	any	-	any	any	any	-	any	any	any	-	any

Role/object	Grade for student [S] in course [C] in faculty [F]				Academic Account		GPAX/GPA report of student [S]			
	C	R	U	D	C	D	C	R	U	D
Academic										
Student [s] in faculty [f] in course [c]	-	-	-	-	-	-	-	S=s	-	-
Graduated Student [s]	-	-	-	-	-	-	-	S=s	-	-
Instructor [c]	C=c	C=c	-	-	-	-	-	-	-	-
Advisor [s]	-	-	-	-	-	-	-	S=s	-	-
Moderator										
Registration Staff [f]	-	F=f	F=f	-	-	-	F=f	any	F=f	-
Main Registration Staff	any	any	-	any	any	any	any	any	-	any