

Activity II: Security Policy

Part I

Assume that you are about to open a 24-hour coffee shop on the Chulalongkorn University campus called "Too Late To Sleep". The coffee shop must provide services to all members of Chulalongkorn University (no entrance fee) and to outsiders (charge for entrance).

1.1 Identify users and roles of all persons involved in the coffee shop (i.e., different types of customers, non-customers, etc.).

Non-customers

- Staff
- Manager
- Owner

Customers

- Instructors
- Students
- Chula Staff
- Non-Chula customers

1.2 You can physically design the shop any way you like. Identify the services (resources) you want to support your different customers and whether or not you would like to create different zones with different services (resources). Your shop must at least have:

one entrance door,
one bathroom,
one coffee service area, and places to sit.

You may add anything else you'd like. Describe the services (resources) in your shop.

- Entrance door
 - o Access places to sit
- Outside coffee service area
 - o For people who doesn't want to come in
- Inside coffee service area
 - o For people who are already in the places to sit area
- Bathroom
- Internet Café room

1.3 Identify resources that require access

- Entrance door
 - o Requires to scan a card for CU members
 - o Owner does not visit often so they could be accompanied by staff, using staff cards
 - o Otherwise requires a payment at the front desk
- Inside coffee service area
 - o Requires access to the entrance door
- Bathroom

- Requires access to the entrance door
- Internet Café room
 - Requires to scan a card for CU members
 - Owner does not visit often so they could be accompanied by staff, using staff cards
 - Requires additional fee for non-CU members at the front desk. They will be given a card to scan after they paid for this additional service.

1.4 Apply your knowledge to design the authorization system (e.g. access control) for your customers.

Access Control Matrix for Too Late Too Sleep

	Entrance door	Outside coffee service area	Inside coffee service area	Bathroom	Internet café room
Staff	Scan card	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Scan card
Manager	Scan card	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Scan card
Owner	Scan card (using staff card)	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Scan card (using staff card)
Instructors	Scan card	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Scan card
Students	Scan card	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Scan card
Chula Staff	Scan card	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Scan card
Non-Chula Customers	Payment is required	Free access	Free access if entrance door is authorized	Free access if entrance door is authorized	Additional payment is required

Part II

Assuming that you are now in charge of a new Registration Systems of Chulalongkorn University, please finish the following exercise.

2.1 Identify users and roles of persons related to the service

- Instructor
- Student
- Staff (Academic advisors)

2.2 Identify resources (data and objects)

- List of course id
- Detail of each courses
 - o Name
 - o Instructor
 - o Schedule
 - o Credits
 - o Free spots for register
 - o Capacity
- Registered student id in each course
- Student's registered courses id
- Audit logs
- Login Credentials

2.3 Identify functions (actions for resources)

- Read course lists
- Read course details
- Request to add courses
- Edit course details
- Request to remove courses
- Approve adding course requests
- Approve removing course requests
- Read list of own registered courses
- Read list of each student's registered courses
- Read list of student id for an owned course
- Read list of student id in each course
- Register courses
- Unregister courses
- Withdraw courses
- View owned logs
- View anyone's logs

2.4 Apply your knowledge to design the authorization system. Please specify whether the user (role) should be allowed to access the resource (read and write). Translate your design into an access control matrix.

Your design must include (but not limited) instructors, students, and academic advisors.

New Reg 2.0 Access Control Matrix

	Course lists	Course details	Course adding requests	Course removing requests	Student registered courses data	Logs
Instructors	R	R/W	R/W (only own's)	R/W (only own's)	R (only own's)	R (only own's)
Students	R	R	-	-	R (only own's)/W (only own's)	R (only own's)
Staff (Academic advisors)	R/W	R	R/W	R/W	R/W	R