UniPark Booking – Database Design

High Level
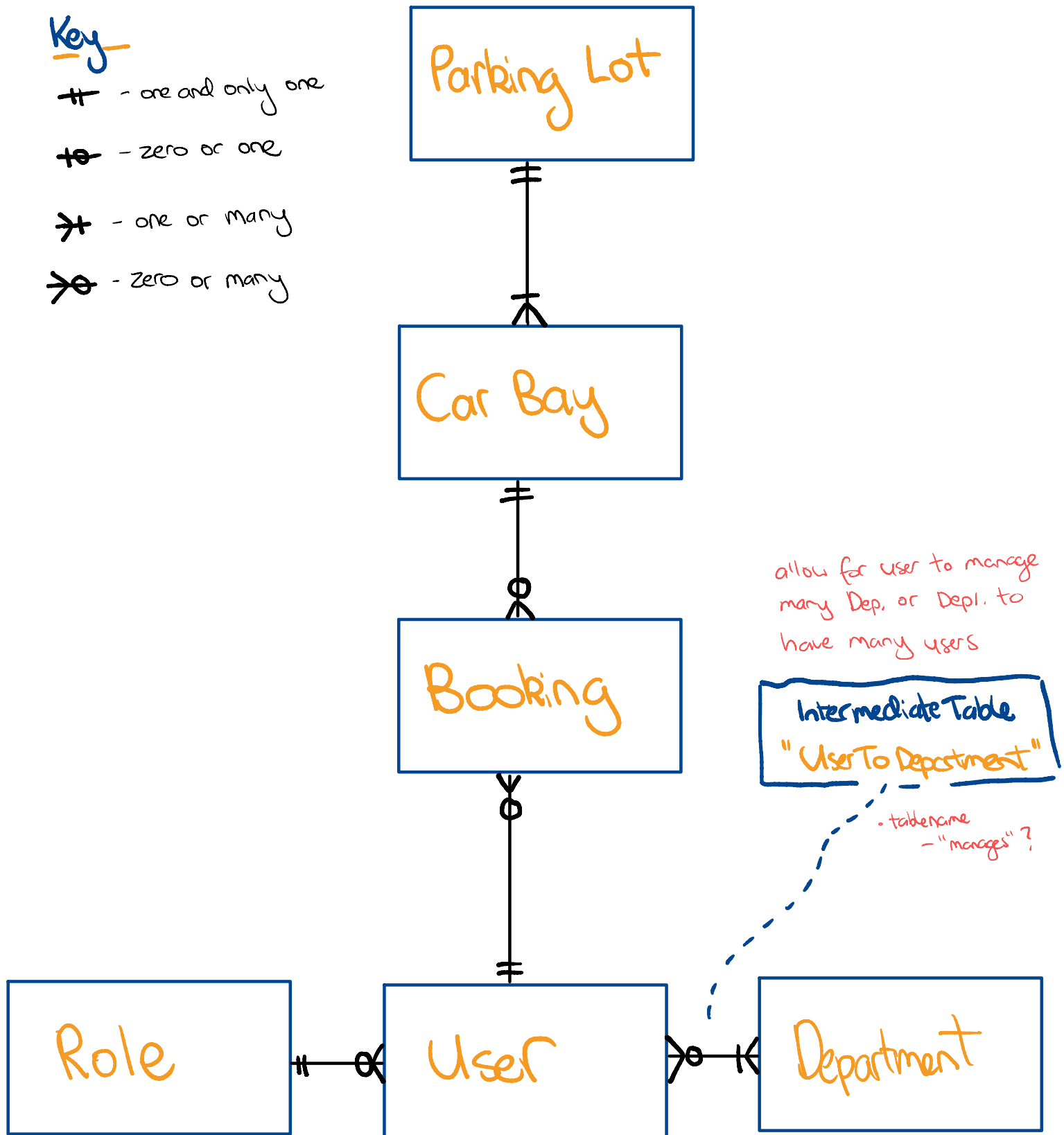
Key

- ⫠ – one and only one
- ⊶ – zero or one
- ≺ – one or many
- ⧁ – zero or many

Parking Lot

Car Bay

Booking

Role

User

Department

allow for user to manage many Dep. or Dept. to have many users

Intermediate Table
"User To Department"

- tablename
  – "manages"?

Parking Lot Model

Parking Lot		
int	id	PK
int	lot number	
int	latitude	
int	longitude	

Car Bay Model

Car Bay

int	id	PK
int	bay number	
int	latitude	
int	longitude	
int	parking lot id	FK

Booking Model

Booking

int	id	PK
str	reference code	
datetime	date	
int	timeslot start	
int	timeslot end	
str	guest name	
str	cas rego	NULLABLE
int	car bay id	FK
int	user id	FK

* Bays can only be reserved between 9am – 5pm, Mon – Fri
- Divide 9 – 5pm into 32, 15min chunks
- Leave 2 chunks (30mins) either side of booking

User Model

	User	
int	id	PK
str	email	
str	password hash	
str	first name	
str	last name	
int	role id	FK
int	department id	FK

Role

Role		
int	id	PK
str	name	
bool	default	← true for only 7
int	permissions	← powers of 2

Department

Department		
int	id	PK
str	name	

— find out if departments divided into lower levels

eg Department → School → ?

— possibly get list from client?

Manages

	Manages	
int	id	PK
int	user_id	FK
int	department_id	FK