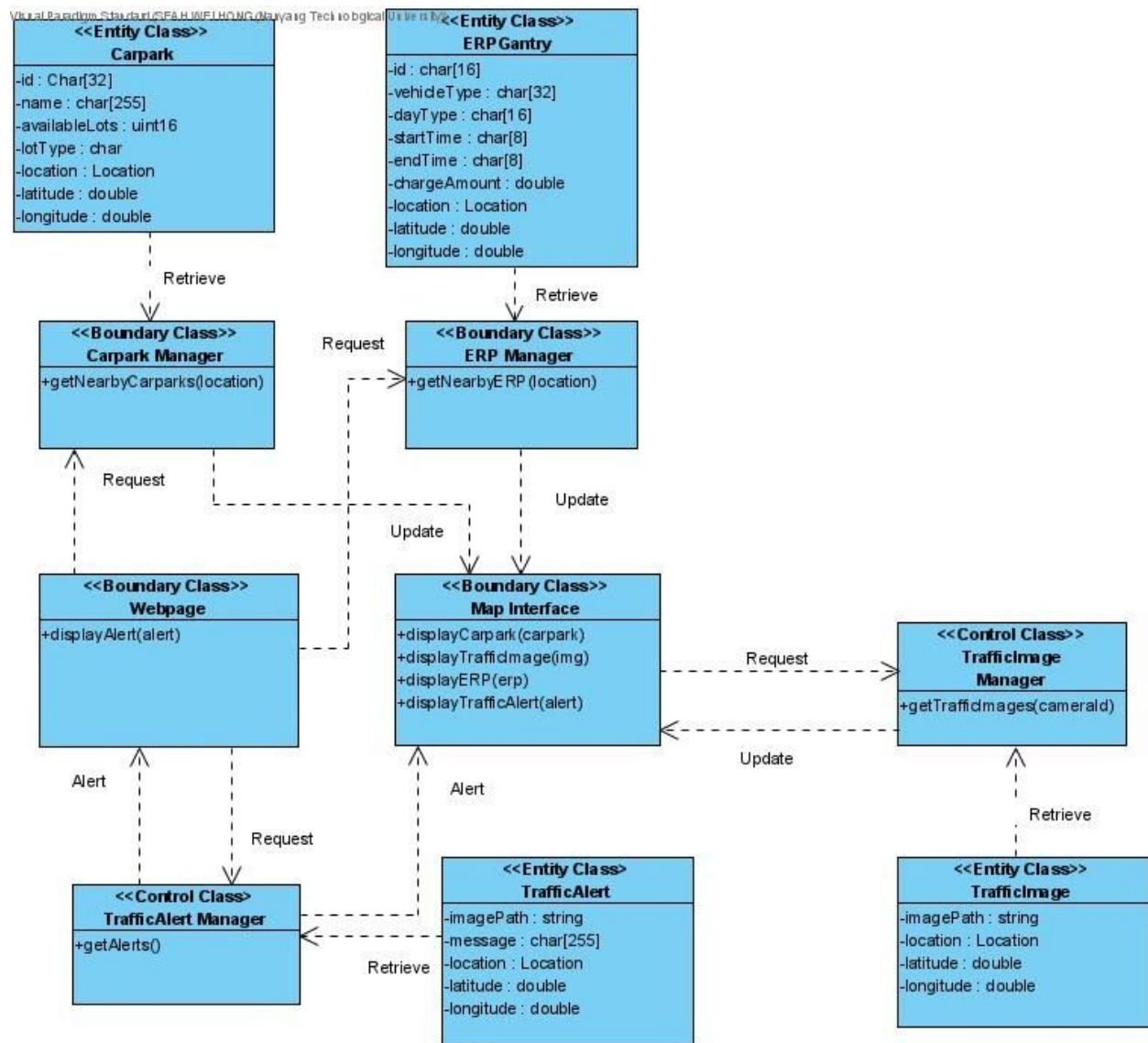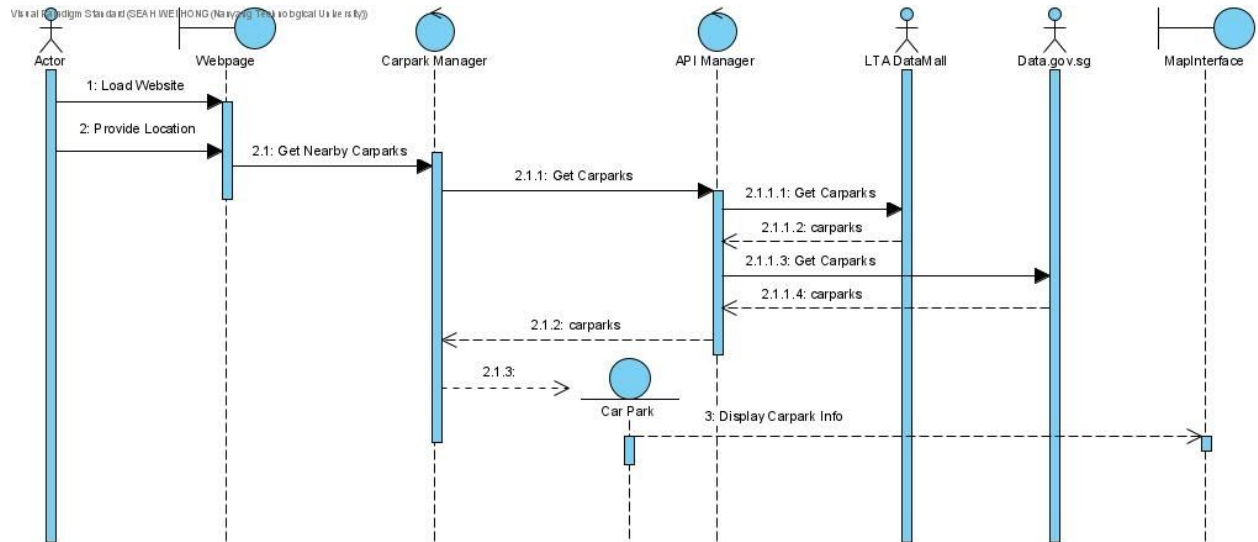# Entity Classes

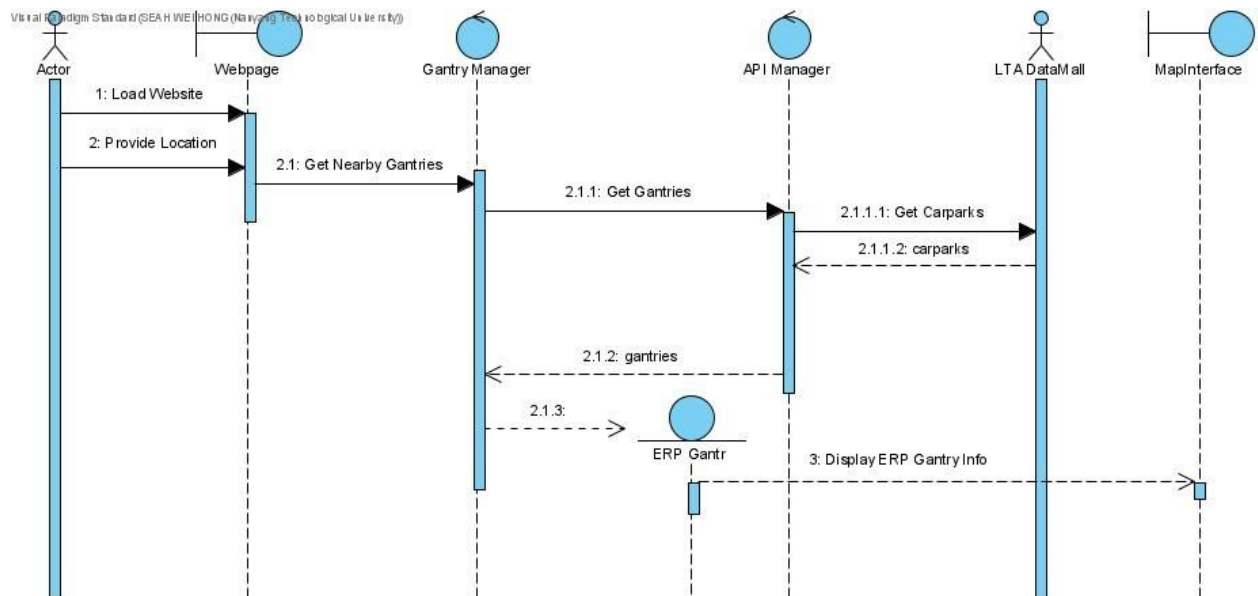| Class Name	Attributes
Carpark	id: char[32] name: char[255] latitude: double longitude: double chargeAmount: uint16 availableLots: uint16 lotType: char latitude: double longitude: double
ERPGantry	id: char[16] latitude: double longitude: double vehicleType: char[32] dayType: char[16] startTime: char[8] endTime: char[8] chargeAmount: double latitude: double longitude: double
TrafficAlert	timeOccured: char[16] latitude: double longitude: double message: char[255]
TrafficImage	latitude: double longitude: double imagePath: string

Class Diagram

<<Entity Class>>
Carpark
- -id : Char[32]
- -name : char[255]
- -availableLots : uint16
- -lotType : char
- -location : Location
- -latitude : double
- -longitude : double

Retrieve

<<Entity Class>>
ERP Gantry
- -id : char[16]
- -vehicleType : char[32]
- -dayType : char[16]
- -startTime : char[8]
- -endTime : char[8]
- -chargeAmount : double
- -location : Location
- -latitude : double
- -longitude : double

Retrieve

<<Boundary Class>>
Carpark Manager
- +getNearbyCarparks(location)

Request

<<Boundary Class>>
ERP Manager
- +getNearbyERP (location)

Request

Update

Update

<<Boundary Class>>
Webpage
- +displayAlert(alert)

<<Boundary Class>>
Map Interface
- +displayCarpark(carpark)
- +displayTrafficImage(img)
- +displayERP(erp)
- +displayTrafficAlert(alert)

Request

<<Control Class>>
TrafficImage Manager
- +getTrafficImages(cameraId)

Update

Alert

Alert

Request

Retrieve

<<Control Class>
TrafficAlert Manager
- +getAlerts()

<<Entity Class>
TrafficAlert
- -imagePath : string
- -message : char[255]
- -location : Location
- -latitude : double
- -longitude : double

Retrieve

<<Entity Class>>
TrafficImage
- -imagePath : string
- -location : Location
- -latitude : double
- -longitude : double

Sequence Diagram: GetCarparks

Sequence Diagram: GetGantries

Sequence Diagram: GetTrafficImages

| Actor | MapInterface | Traffic Image Manager | API Manager | LTA DataMall | TrafficImageModal |

1: Click Camera Icon

1.1: Get Traffic Image

2: Get Traffic Images

2.1: Get Traffic Images

2.2: Traffic Images

2.3: Traffic Images

3: create

Traffic Image

4: display
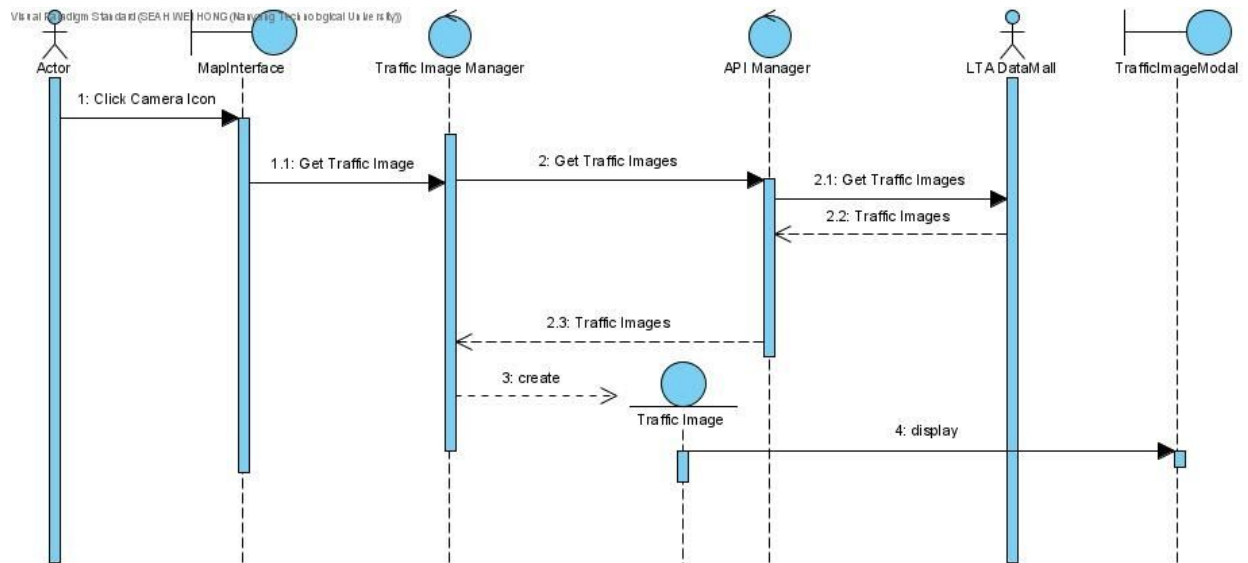
Sequence Diagram: GetTrafficAlerts

| Actor | Website | Alert Manager | API Manager | LTA DataMall | MapInterface |

1: Load Website

1.1: Get Alerts

1.1.1: Get Traffic Incidents

1.1.1.1: Get Incidents

1.1.1.2: Incidents

1.1.2: Incidents

1.1.3:

Alert

2: Display Alert

3: Display Alert

State Machine Diagram

Request Location Permission

Granted

Yes

No

Request Manual Location

do /
ShowMap
body = prompt user to select location on map

Load Alerts

Alert Available

Yes

No

Display Notification

Select Traffic Camera
do / WaitSelectCamera

Display Image

Wait for image dismissal

Load Carpark Availability
do / LoadNearbyCarparks(location)

Display Carpark Info on map

Load ERP Gantry
do / LoadNearbyGantries(location)

Display ERP Gantry on map