



**CT071-3-3-DDAC**

**INDIVIDUAL ASSIGNMENT**

**Designing and Developing Applications on the Cloud**

**UC3F1706SE**

**HAND IN DATE: 13<sup>th</sup> April 2018**

<b>NAME:</b>	<b>Ng Hoe Shin</b>
<b>TP NUMBER:</b>	<b>TP035427</b>
<b>INTAKE CODE:</b>	<b>UC3F1706SE</b>
<b>LECTURER NAME:</b>	<b>Dr.Kalai Anand A/L Ratnam</b>

## Acknowledgement

Above all else, I might want to offer my most profound thanks to my instructor, Dr.Kalai Anand A/L Ratnam, who has been giving me heaps of learning and thought regarding the Microsoft Azure Cloud Computing. Furthermore, he was additionally exceptionally accommodating and gives proficient exhortation on the most proficient method to convey a web application to Azure App Service. Not just that, he gives valuable materials and instruments that assistance me to spare a great deal of time on sending the web application and finish the task on time.

I additionally need to accept this open door thank to my course mates, who educate and manage me all the time in this task. They will give assistance and show me about the C# programming and a few highlights of Microsoft Visual Studio 2015 that I have never utilized. In the meantime, I welcome that my course mates who will share their insight and help me to finish this task.

Taking everything into account, I have increased more information about the Azure Cloud Computing which is exceptionally valuable, since it could help me to apply it in my future works.

## Table of Contents

Acknowledgement .....	2
1.0 Introduction.....	4
1.1 Project Background.....	4
1.2 Project Objective.....	5
1.3 Project Scope .....	5
1.4 Project Specification .....	6
1.5 Project Deliverables .....	6
2.0 Project Plan .....	7
2.1 Project Plan .....	8
3.0 Design .....	9
3.1 Cloud Architecture.....	9
3.2 Design Consideration.....	10
3.3 Use Case Diagram.....	11
3.4 Use Case Specification .....	12
3.5 Sequence Diagram .....	19
3.5.1 Login.....	19
3.5.2 Add Schedule .....	20
3.5.3 Add Ship .....	21
3.5.4 Add Customer .....	21
3.5.5 Add Order .....	22
3.5.6 View Order.....	22
3.5.7 Register Agent .....	23
3.6 Class Diagram.....	24
4.0 Implementation .....	25
4.1 Create Web Application and SQL Database.....	25
4.2 Traffic Manager .....	32
4.3 Performance Testing .....	35
4.4 Web Application Screenshot.....	37
5.0 Unit Testing .....	40
6.0 Conclusion .....	41
7.0 Appendix.....	42

## 1.0 Introduction

### 1.1 Project Background

Maersk Line is the global container division and the largest operating unit of the A.P. Moller – Maersk Group, a Danish business conglomerate. It is the world's largest container shipping company having customers through 374 offices in 116 countries. It employs approximately 7,000 sea farers and approximately 25,000 land-based people. Maersk Line operates over 600 vessels and has a capacity of 2.6 million TEU. The company was founded in 1928.

Operating in 100 countries and transporting goods around the globe, at first glance it would appear Danish shipping company Maersk Line is already handling all the cargo it can manage. But when Maersk determined that the volume of most of the goods it was shipping had grown to full capacity, the company decided that cloud powered solutions would be a crucial part of rectifying the situation.

“There was a ‘mind-opener’ where Maersk said, ‘How can we support the overall business strategy, and also from an IT perspective,’” says Soeren Lorenzen, an account general manager with Hewlett-Packard company who is involved first-hand with Maersk’s ITO efforts. “There was a new CIO who wanted to outsource every part of IT, but without [negatively] impacting shipping.”

In an effort to support further business growth and increase organizational flexibility, Maersk decided to consolidate all of its data centers and server rooms operating worldwide onto a virtualized platform. Microsoft Azure was already hosting some of Maersk’s IT environment, and in March 2016 Maersk initially approached Microsoft about expanding the scope of the relationship. Moving forward, Lorenzen says Maersk is currently changing over

its IT setup based on Microsoft Azure, starting with the desktop environment up to container management.

## 1.2 Project Objective

This project is aimed at developing a web application and deploy it on the Microsoft Azure Cloud Services, which allows the admin to manage the Maersk cargo and shipping through the website. In this system, admin is able to make reservation for the company who want to ship their parcel by using container. Besides, it also allows the admin to register a container, ship, and shipyard. Not only that, the admin can also view the reservation and other information that had been registered in this system.

## 1.3 Project Scope

The scope of this project will include the design and development of the web application based on the Maerks Line requirement. This system requires a database to store the reservation and others information by using SQL database from Azure. This web application provides a login page for admin login. It is to make sure that the website is secured and prevent anonymous from stealing information. After the website has developed, it will be deployed on the Microsoft Azure Cloud Services. Traffic manager will be implemented in order to control the request from web clients. The website will be distributed to the nearest point based on the user request location. Lastly, the performance testing will be done and analysed if there is any possibility of existence of bug. This is to ensure that the system will perform smoothly when deployed.

## 1.4 Project Specification

Below are list of requirements and goals that are to be implemented on the web application.

**Provisioning:** You must be able to provision the new application to the Microsoft Azure Platform.

**Maintainability:** You must be able to upgrade the application and perform other maintenance tasks while multiple tenants are using it.

**Monitoring:** You must be able to monitor the application at all times to identify any problems and to troubleshoot them. This includes monitoring how each tenant is using the application.

**Availability:** Tenants want the application to be constantly available, perhaps with guarantees defined in an SLA. Again, the activities of other tenants should not affect the availability of the application.

**Scalability:** The application must be scalable to meet the demand of the application.

## 1.5 Project Deliverables

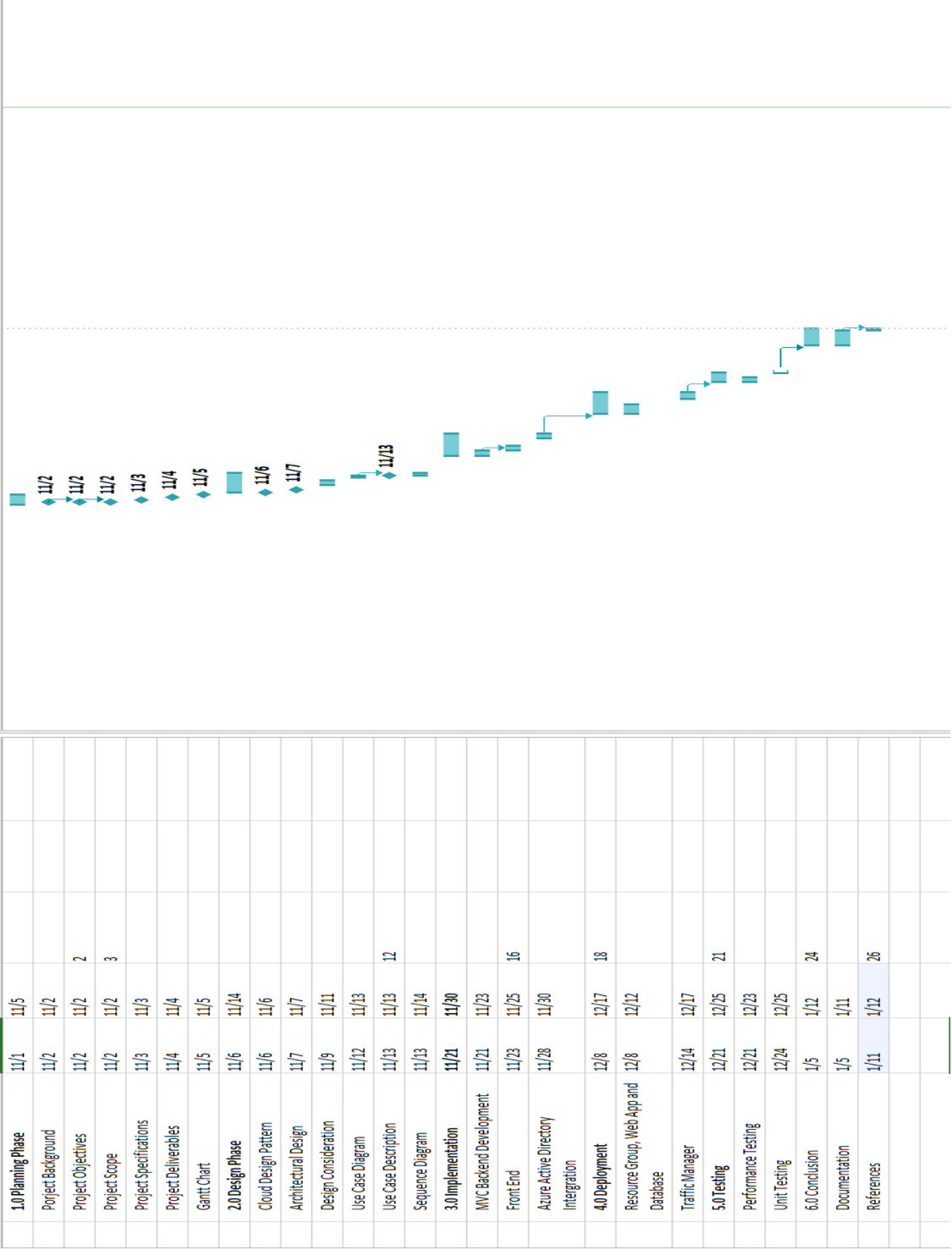
The Maerks Line web application is available and compatible with different types of browser, such as Google Chrome, Mozilla Firefox, Microsoft Edge, and others. Users will be able to perform all the functionalities that listed below.

- User able to register ship, container, and shipyard in the web application.
- User able to make reservation for the shipment.
- User able to perform update and delete the reservation, ship, container, and shipyard in this web application.
- User able to view the details, such as registration information.
- User able to view the details of shipment information, such as departure time, arrival time, price, departure shipyard, and arrival shipyard.

## 2.0 Project Plan

The project plan for the software developer is to follow the Gantt Chart in developing the web application by using Visual Studio 2017 with MVC. After the web application is developed, the software developer will deploy the web application to the Microsoft Azure Cloud Services. Traffic manager will be implemented to the web application. After that, performance testing will be conducted to make sure that the system is running well.

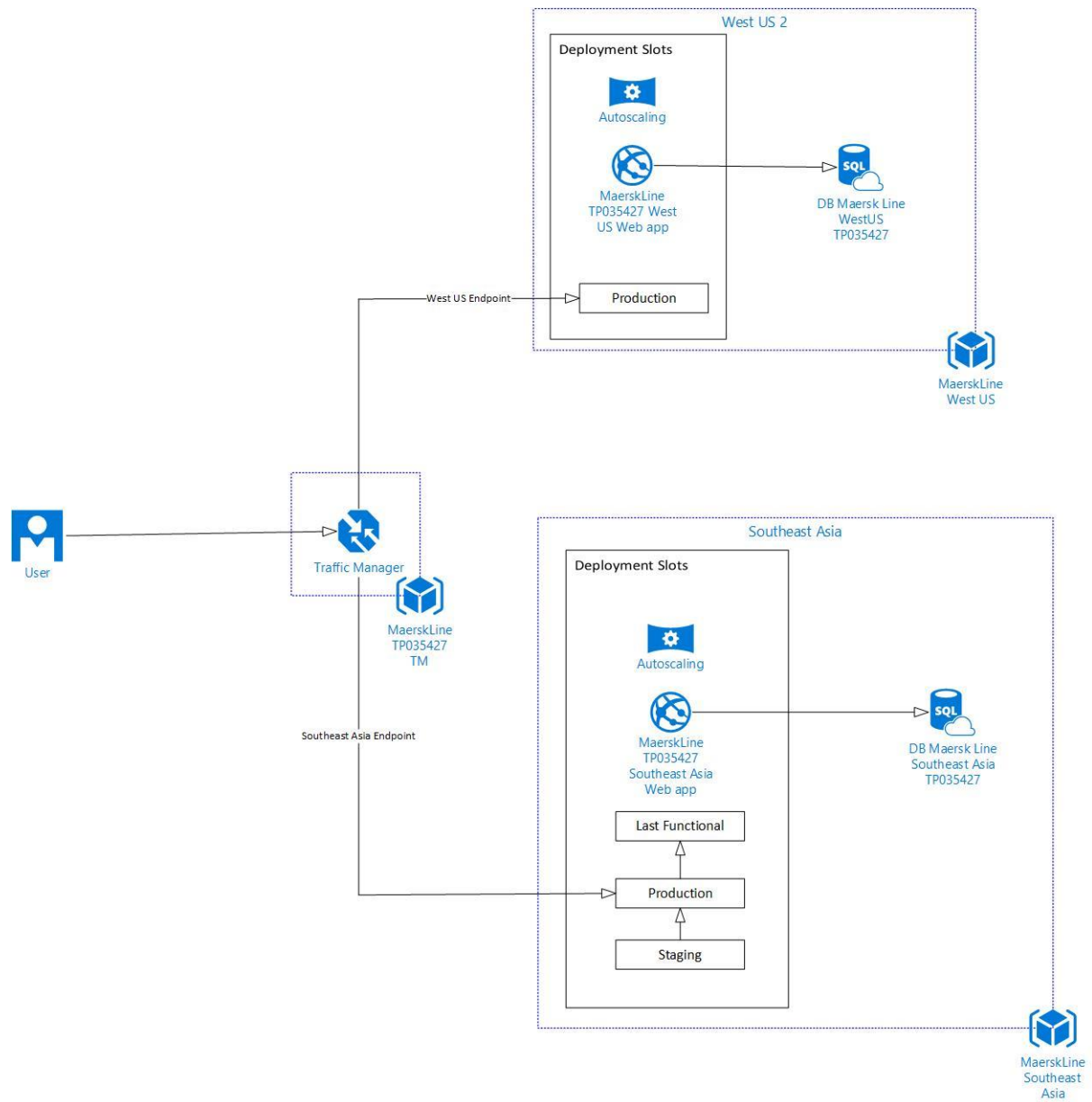
2.1 Project Plan





## 3.0 Design

### 3.1 Cloud Architecture



### 3.2 Design Consideration

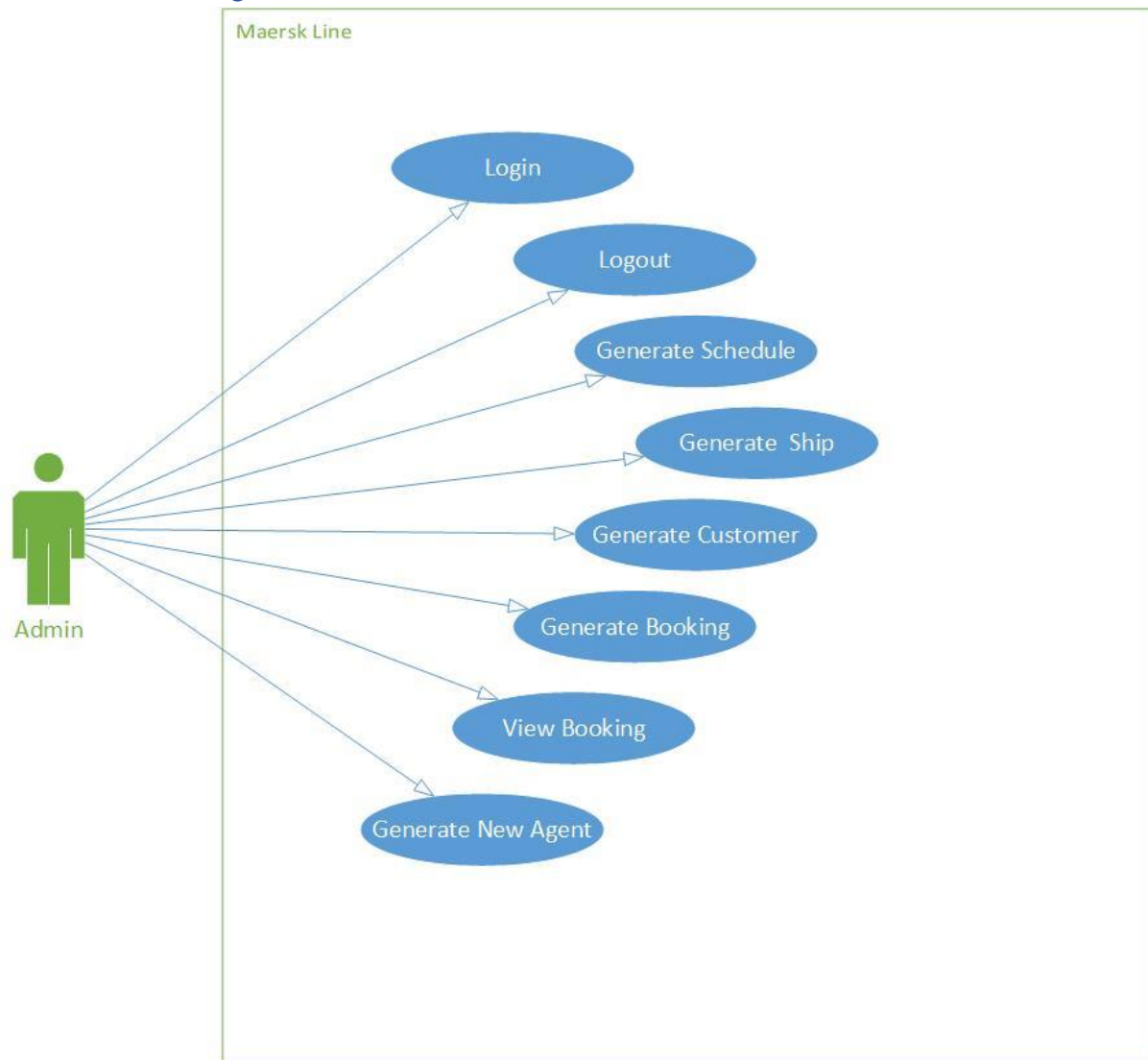
Above all else, the product engineer needs to make another space of the web application, which is <http://maersklinelsf.azurewebsites.net> . The space name is connected with the Maerks Line site. Furthermore, the space name is made when the product designer distribute the web application shape Visual Studio 2017 to the Microsoft Azure Cloud Services. Clients can without much of a stretch access to the web application by utilizing this space name whenever.

The outline of the web application is straightforward and clear. The product designer utilizes the straightforward format and site layout to build up the web application as it can be effortlessly comprehended by the clients. As per straightforward sites does not contain over the top data which would make client effortlessly explore and keep up without reading to numerous confounding articulation. For instance, the client could without much of a stretch read a straightforward word or symbol and discover the catch with basic UI. Basic web application could convey great impression to the clients who are utilizing it.

Programming designer utilized Model-View-Controller (MVC) to devleop the web application. This is on account of it incorporated with ASP.NET highlights, for example, ace pages, information official, and validation. Plus, it permits the product designer easily to oversee multifaceted nature by plunging a web application into the model, the view, and the controller.

The Maerks Line web application is accessible and perfect with various kinds of web program, for example, Google Chrome, Mozilla Firefox, and Microsoft Edge. However clients are prescribed to utilize Google Chrome to access to the site since it is a superior web program.

### 3.3 Use Case Diagram



### 3.4 Use Case Specification

**Table 1: Login**

Use Case ID:	1
Use Case Name:	Login
Summary:	The Users will be able to login into this website
Dependency:	N/A
Actors:	User
Precondition:	The user will be required to enter the username and password in order to login to the website.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. The login page will be shown.</li><li>2. Then, the framework will incite the client to fill in the accreditations.</li><li>3. The client will then embed the username and secret key</li><li>4. The framework will then need to confirm the qualifications.</li><li>5. User signed in to the web application effectively.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If login details are verified, then the users will be login into the web application.</li><li>2. If login details are invalid, then the system will prompt the users to re-enters the user name password.</li></ol>
Post-condition	The user is logged in to the web application.

**Table 2: Create Schedule**

Use Case ID:	2
Use Case Name:	Create Schedule
Summary:	The user creates a schedule for a company in the website.
Dependency:	N/A
Actors:	User
Precondition:	The user will need to be logged in and also have entered the valid schedule details.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. Once logged in to the website</li><li>2. The Home Page is displayed.</li><li>3. The user will need to select the “Schedule” option.</li><li>4. The system will then prompt the user to click the create button.</li><li>5. The user will then insert all of the Schedule details.</li><li>6. After that, the System will verify information.</li><li>7. Shipment is created and saved into the database.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If shipment details are invalid or entered wrongly, then the system prompts the user to re-enter the Schedule details</li></ol>
Post-condition	Schedule details are stored into the database system.

**Table 3: Create Ship**

Use Case ID:	3
Use Case Name:	Create Ship
Summary:	User registers container into this website.
Dependency:	N/A
Actors:	User
Precondition:	The user will need to be logged in and the user requires to insert the valid container details.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. Once logged in to the website</li><li>2. The Home Page is displayed.</li><li>3. The user will then select the “Ship” option.</li><li>4. The system will prompt the user to click the create button.</li><li>5. The user will then insert the container details.</li><li>6. After that, the system verifies the information.</li><li>7. Once verified the container will then be created into the database itself.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If container details are invalid or entered incorrectly, then the system prompts the user to re-enter the container details</li></ol>
Post-condition	Container details are stored into the database system.

**Table 4: Create Shipyard**

Use Case ID:	4
Use Case Name:	Create Customer
Summary:	User registers shipyard into this website.
Dependency:	N/A
Actors:	User
Precondition:	The user will need to be logged in and the user requires insert the valid customer details.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. Once logged in to the website</li><li>2. The Home Page is displayed.</li><li>3. Then the User will need to select the “Customer” option.</li><li>4. Once done the system will prompt the user to click the create button.</li><li>5. The user inserts customer details.</li><li>6. The system will then verify all of the information.</li><li>7. Once the verification is done the customer information is created into the database.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If customer details are invalid or entered incorrectly, the system prompts the user to re-enter the shipyard details</li></ol>
Post-condition	Customer details are stored into the database system.

**Table 5: Create Booking**

Use Case ID:	5
Use Case Name:	Create Booking/Orders
Summary:	The user will need to be logged in and The user will need to be logged in and only the user able to create the booking details.
Dependency:	N/A
Actors:	User
Precondition:	All of the booking details must be created and saved in to the database.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. Once logged in to the website</li><li>2. The Home Page is displayed.</li><li>3. The user selects the “Orders” option.</li><li>4. The system will prompt the user to create the booking details by selecting the ship, customer and also the schedule.</li><li>5. Once selected the user will be prompt to create the container.</li><li>6. Once created it will be saved into the database.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If booking details does not exist or it has not been made, then the user unable to view the shipment information.</li></ol>
Post-condition	User able to create the booking details from the web application.



**Table 6: View Booking**

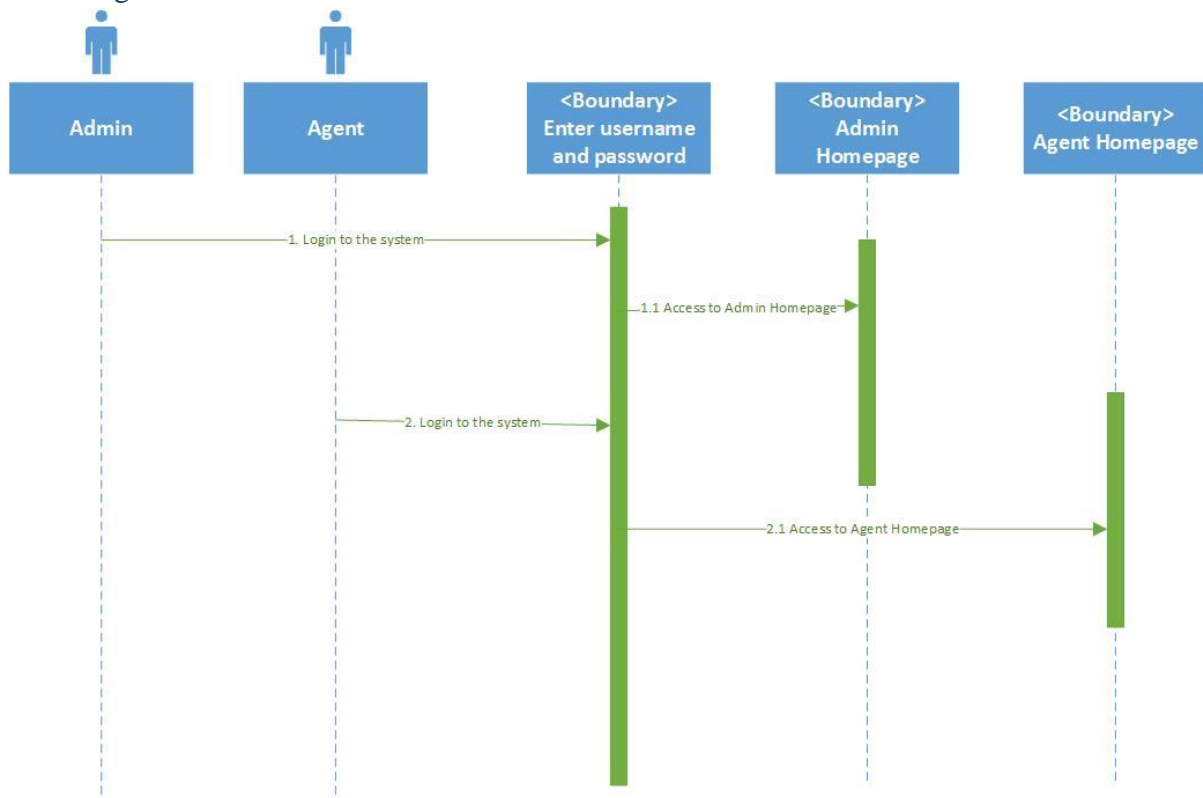
Use Case ID:	6
Use Case Name:	View Booking
Summary:	The user will need to be logged in and The user will need to be logged in and only the user able to view the shipment details.
Dependency:	N/A
Actors:	User
Precondition:	All of the Shipment details must be created and saved in to the database.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. Once logged in to the website</li><li>2. The Home Page is displayed.</li><li>3. The user selects the “View Booking” option.</li><li>4. The system will prompt the user to view the shipment details.</li><li>5. The user can update and delete the shipment from the table.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If booking details does not exist or it has not been made, then the user unable to view the shipment information.</li></ol>
Post-condition	User able to view the booking details from the web application.

**Table 7: Create Agent**

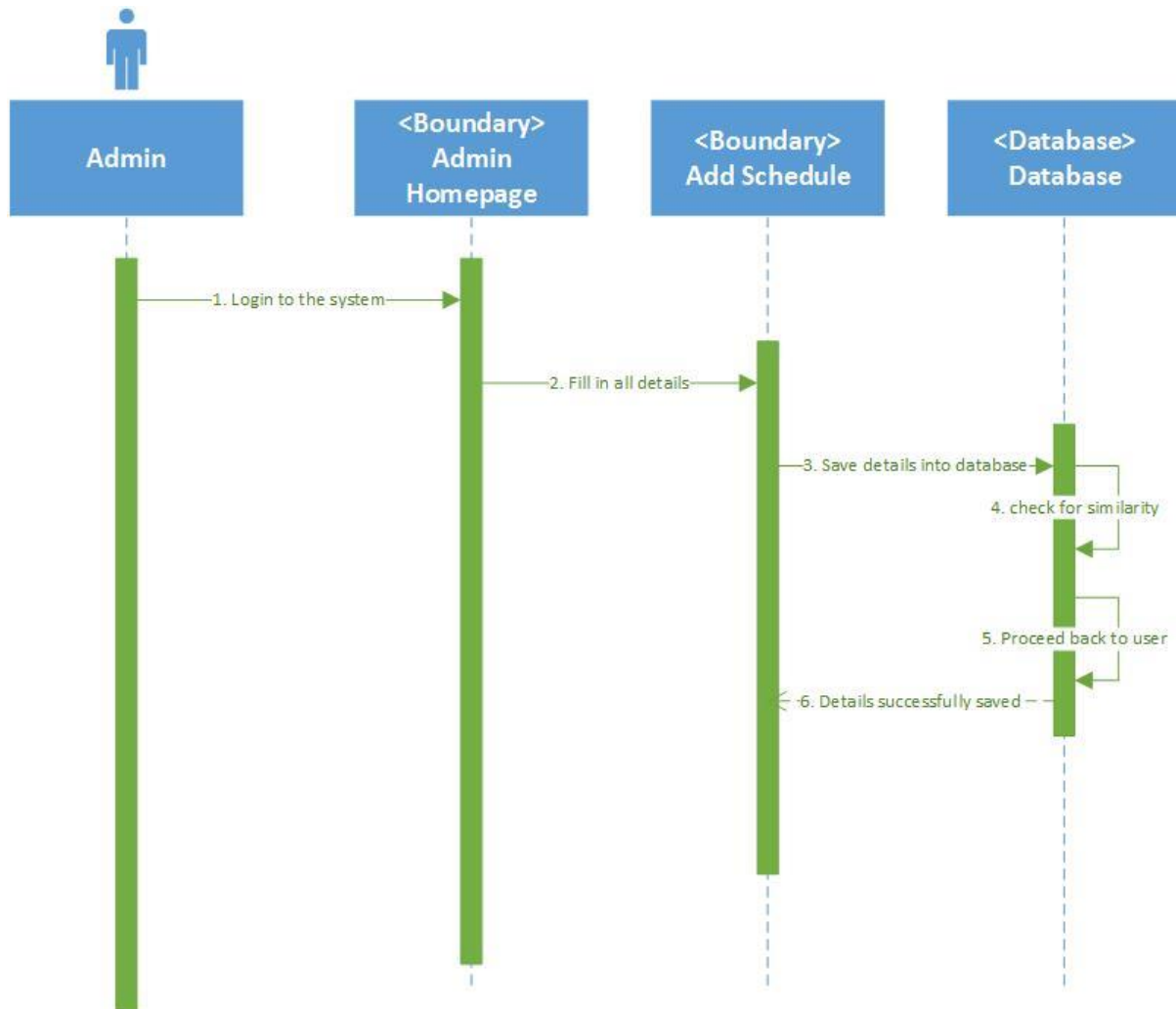
Use Case ID:	7
Use Case Name:	Create Agent
Summary:	The user will need to be logged in and only the user able to create a new agent
Dependency:	N/A
Actors:	User
Precondition:	All of the agent details must be created and saved in to the database.
Description of the Main Sequence:	<ol style="list-style-type: none"><li>1. Once logged in to the website</li><li>2. The Home Page is displayed.</li><li>3. The user selects the “New Agent” option.</li><li>4. The system will prompt the user to fill in all of the agent’s details</li><li>5. Once that is done the will need to click the create button</li><li>6. The agent’s data will be saved into the database.</li></ol>
Description of Alternative Sequence:	<ol style="list-style-type: none"><li>1. If booking details does not exist or it has not been made, then the user unable to view the shipment information.</li></ol>
Post-condition	User able to view the booking details from the web application.

### 3.5 Sequence Diagram

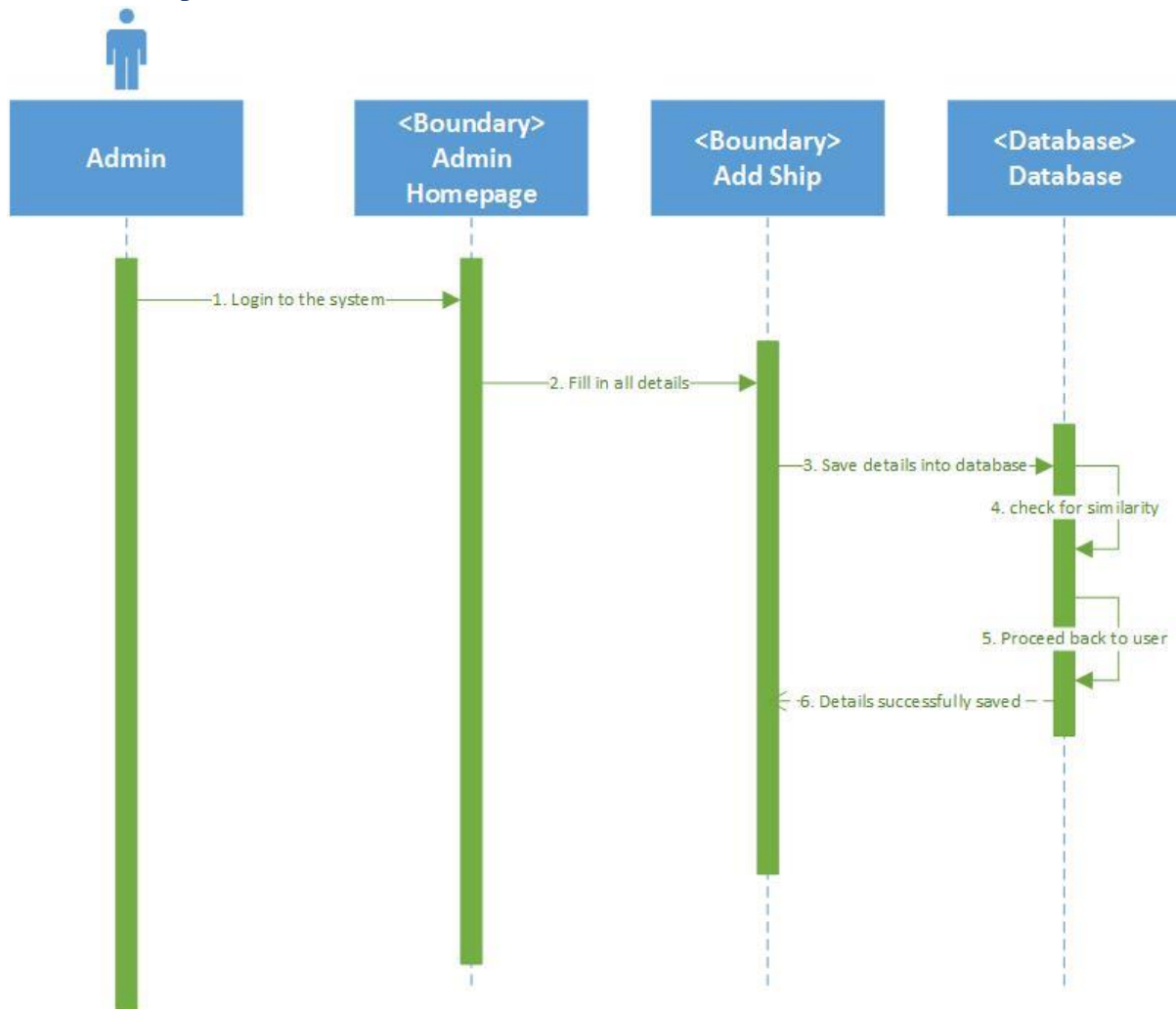
#### 3.5.1 Login



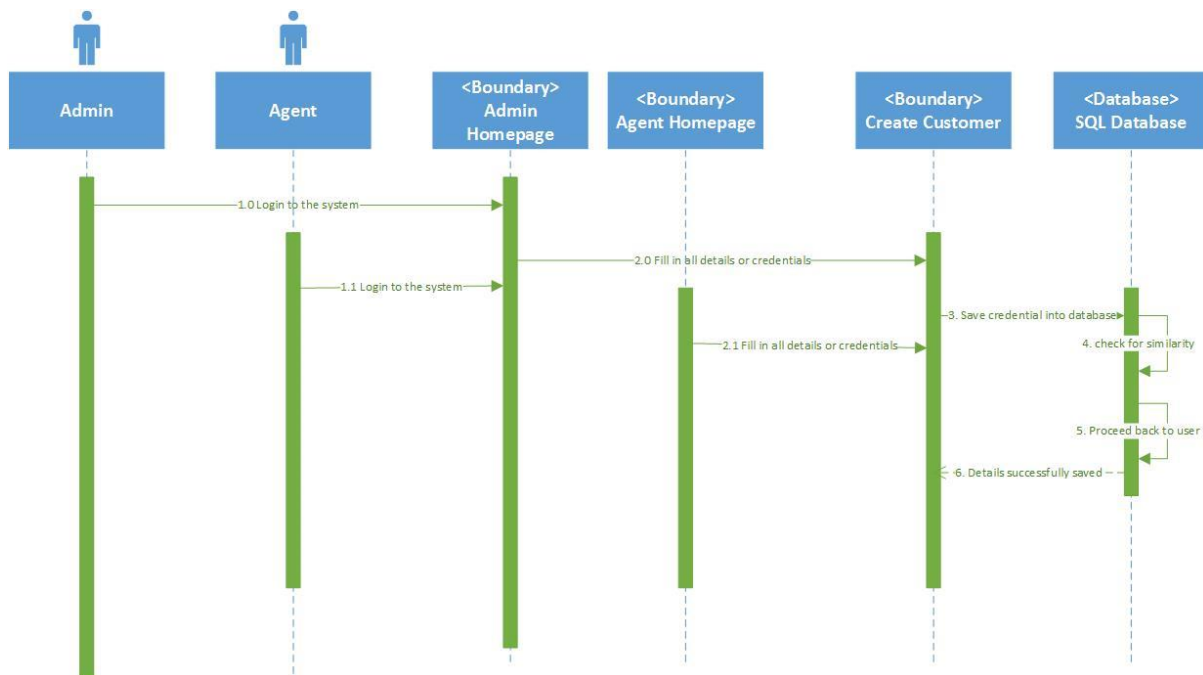
### 3.5.2 Add Schedule



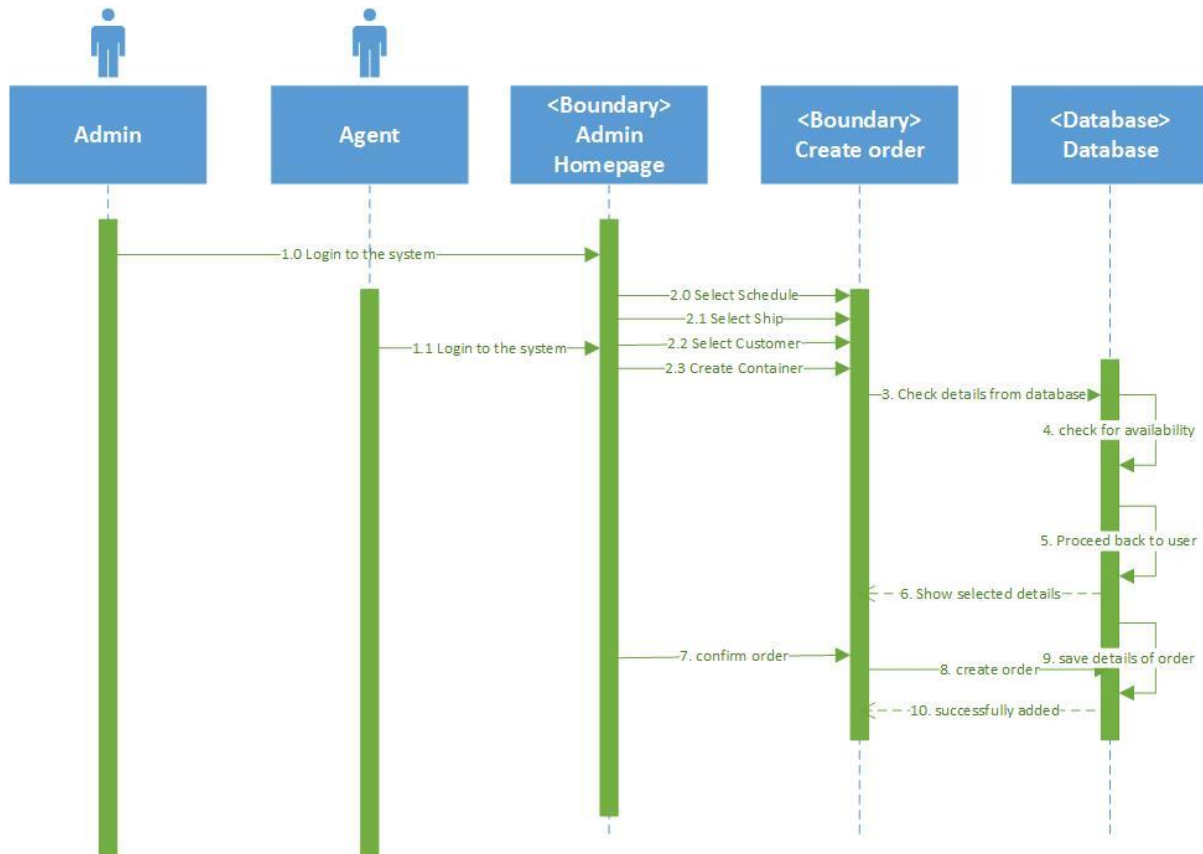
### 3.5.3 Add Ship



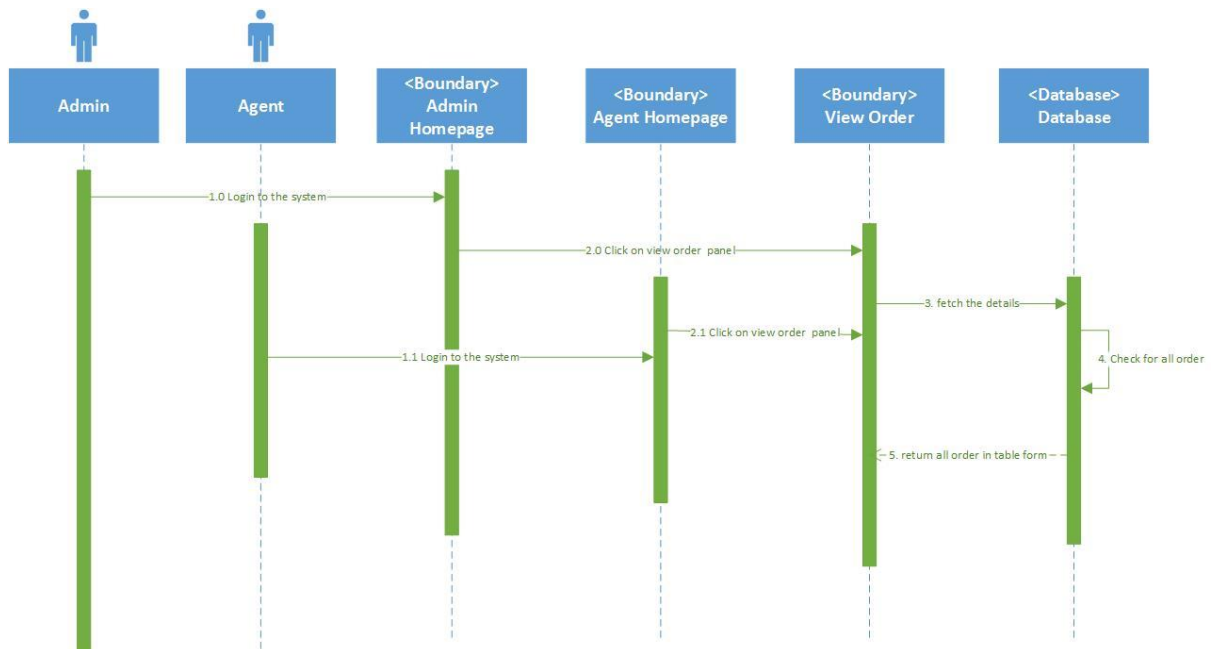
### 3.5.4 Add Customer



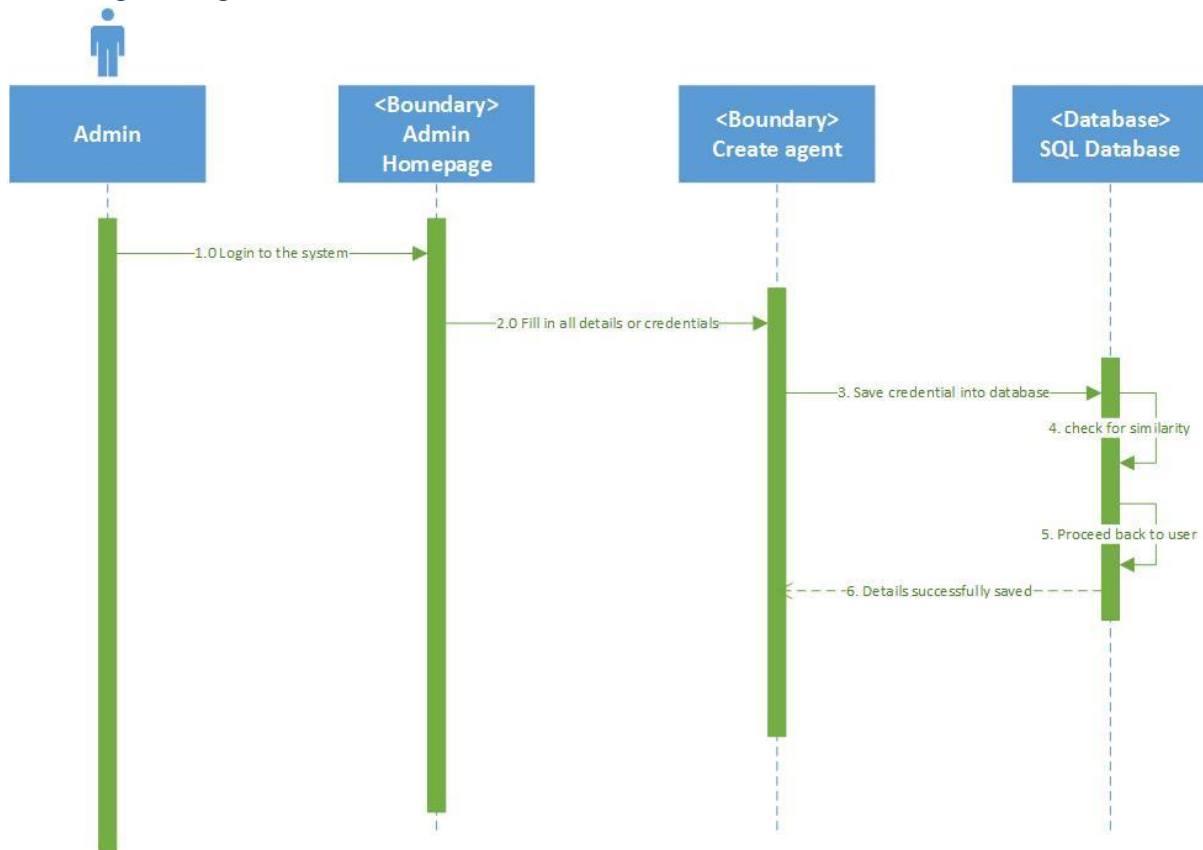
### 3.5.5 Add Order



### 3.5.6 View Order



### 3.5.7 Register Agent



### 3.6 Class Diagram

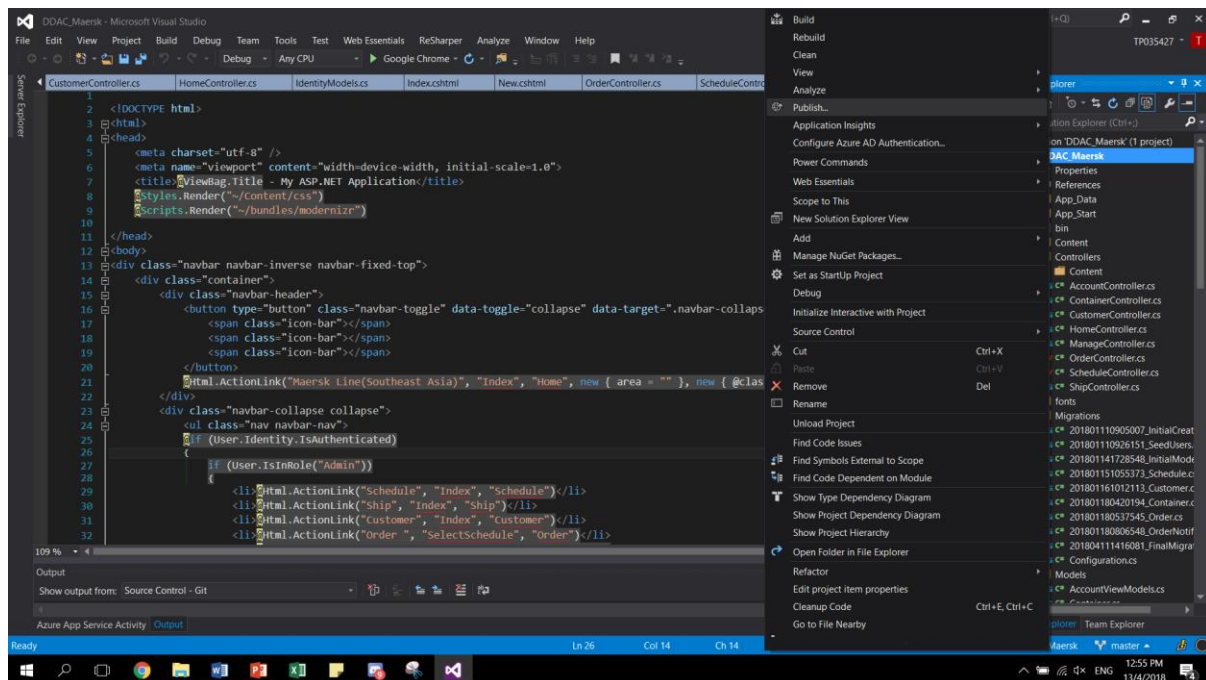




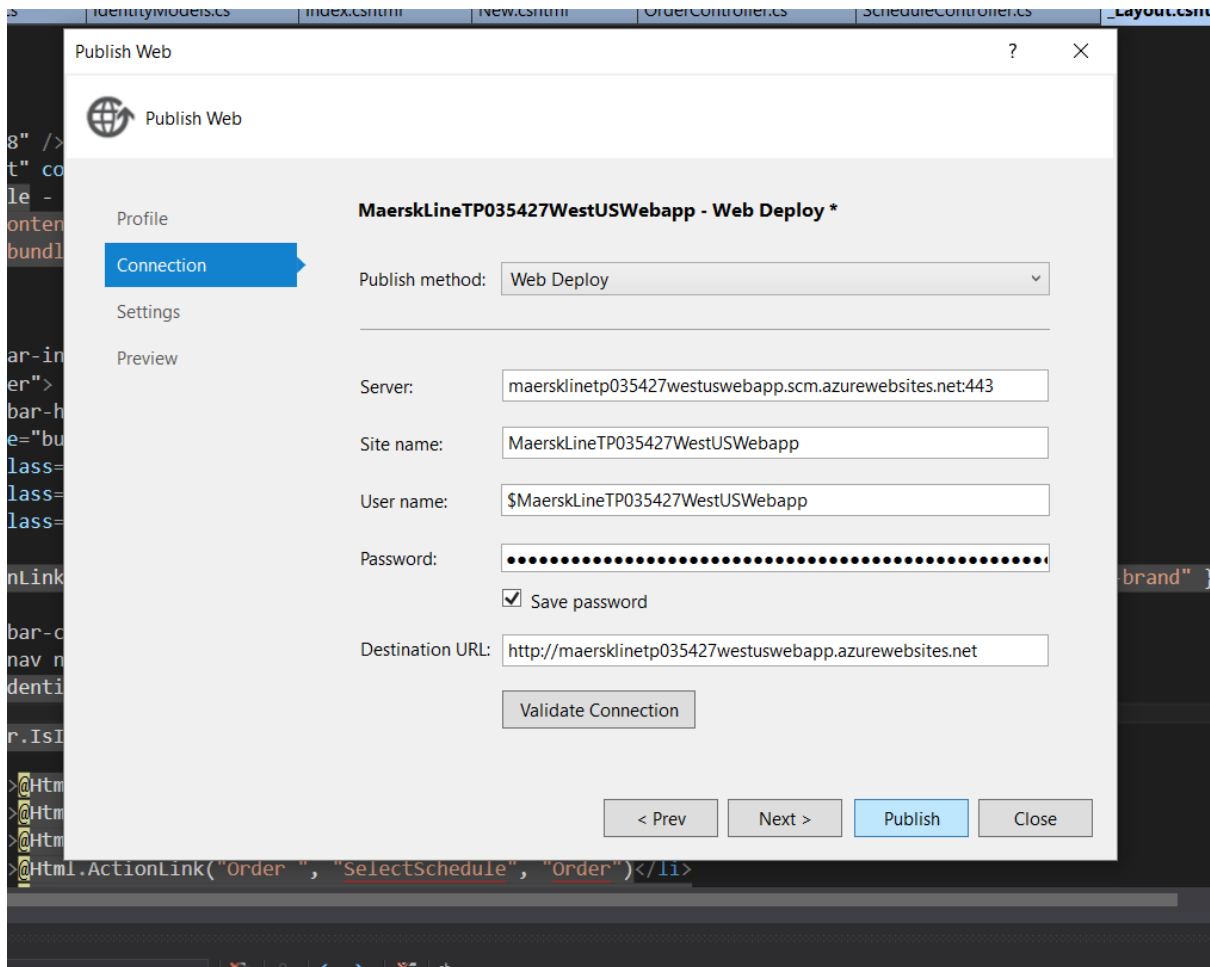
## 4.0 Implementation

### 4.1 Create Web Application and SQL Database

Right after the programmer has finished the improvement of Maerks Line web application, the accompanying advance will be to distribute it on to the Azure Cloud Services. To do this, the product engineer should right tap the document which is situated at the upper right-hand side of the show screen and after that select the "Publish..." alternative to publish it.



After the programmer has tapped on the publish alternative, the Visual Studio will then show a page where the client should tap on "make new profile". At that point, the framework will show a few distinct choices to enable the client to choose on the choices, for example, Microsoft Azure App Service, IIS, FTP, and so on, Folder, and Import profile. At that point, the product designer should choose on the Microsoft Azure App Service, and afterward select "Make New" alternative and snap "alright". From that point onward, the framework will incite the client to fill in the majority of the spaces, for example, compose the Web Application Name, Subscription, rename Resource Group, and select the App Service Plan.



Method for application administrations creation in Azure which is done from Microsoft Visual Studio 2015. Subsequently, it contains the control setting for the web application itself. Other than that, the administrator of Azure can likewise stop the greater part of the administrations of running the site too on cloud. Also, it additionally gives a few sorts of administrations to the administrator to deal with the web application. The URL to the Maerks Line web application will be "... ". Besides, the client will likewise need to rehash the above strides by making another asset gather with the area at West US.

Home > App Services						
App Services						
Asia Pacific University						
+ Add   Edit columns   Refresh   Assign Tags   Start   Restart   Stop   Delete						
Subscriptions: Free Trial						
Filter by name...   All resource groups   All locations   No grouping						
2 items						
<input type="checkbox"/>	NAME ↑	STATUS	APP TYPE	APP SERVICE PLAN	LOCATION ↑	SUBSCRIPTION ↑
<input type="checkbox"/>	MaerskLineTP035427SoutheastAsiaWebapp	Running	Web app	S1-SoutheastAsia	Southeast Asia	Free Trial
<input type="checkbox"/>	MaerskLineTP035427WestUSWebapp	Running	Web app	S1-West	West US 2	Free Trial

Once the programmer has transferred web application is effectively with no mistake or bugs, the client will be required to tap the "+" catch and look for the database choice. At that point, the framework will show a few sorts of choices to enable the client to choose from which are the SQL Database, SQL Data Warehouse, and others. From that point onward, the client needs to choose on the SQL Database alternative. After the determination is done, the client will be incited to fill in the greater part of the spaces that are given.

The screenshot shows the 'Add new' dialog in the Azure portal for creating a new SQL database. The left pane displays a search bar with the placeholder 'Filter by name...', a table header 'NAME' with a sort icon, a large 'SQL' icon, and the message 'No SQL databases to display'. Below this is a blue button labeled 'Create SQL databases'. The right pane contains a form with the following fields: 'Database name' (text input with placeholder 'Enter database name'), 'Subscription' (dropdown menu), 'Resource group' (radio buttons for 'Create new' and 'Use existing', with a text input for the new group), 'Select source' (dropdown menu with 'Blank database' selected), 'Server' (link to 'Configure required settings'), 'Want to use SQL elastic pool?' (radio buttons for 'Yes' and 'Not now', with 'Not now' selected), 'Pricing tier' (link to 'Configure required settings' with a lock icon), and 'Collation' (text input with 'SQL\_Latin1\_General\_CP1\_CI\_AS' selected). At the bottom of the right pane is a checkbox labeled 'Pin to dashboard'.

After the client has filled in the greater part of the spaces, the client will then need to pick a few alternatives. Right off the bat, the client is required to tap on the "Make new" for the assets bunch alternative. At that point, the client should make a server for the database by tapping on the "Server" choice. When the majority of that is done the framework will then incite the client to fill in the greater part of the spaces again for the new server.

+

Add

Edit columns

...

More

Filter by name...

NAME

SQL

No SQL databases to display

Try changing your filters if you don't see what you're looking for.

Create SQL databases

Database name

DBMaerskLine-SoutheastAsia-TP035427

Subscription

Free Trial

Resource group

Create new

Use existing

MaerskSouthEastAsia-TP035427

Select source

Blank database

Server

Configure required settings

Want to use SQL elastic pool?

Yes

Not now

Pricing tier

Configure required settings

Collation

SQL\_Latin1\_General\_CP1\_CI\_AS

Pin to dashboard

Create a new server

No servers found

Server name

maerskline-southeast-asia

Server admin login

admin

Password

\*\*\*\*\*

Confirm password

\*\*\*\*\*

Location

Southeast Asia

Allow azure services to access server

The client should tap on the "Valuing level" choice for the database stockpiling. From that point forward, the client is prescribed to choose the Basic bundle which the cost is significantly less expensive than the Standard bundle itself. Once that is done, the client should tap the "Apply" catch to affirm the choice of the bundle.

Choose your pricing tier

Browse the available plans and their features

<div>Traffic Manager</div> <div>Geo availability</div> <div>312.48</div> <div>MYR/MONTH (ESTIMATED)</div>	<div>Traffic Manager</div> <div>Geo availability</div> <div>624.96</div> <div>MYR/MONTH (ESTIMATED)</div>	<div>Traffic Manager</div> <div>Geo availability</div> <div>1,249.92</div> <div>MYR/MONTH (ESTIMATED)</div>
<b>B1 Basic</b>	<b>B2 Basic</b>	<b>B3 Basic</b>
1 Core	2 Core	4 Core
1.75 GB RAM	3.5 GB RAM	7 GB RAM
10 GB Storage	10 GB Storage	10 GB Storage
Custom domains	Custom domains	Custom domains
SSL Support SNI SSL Included	SSL Support SNI SSL Included	SSL Support SNI SSL Included
Up to 3 instance(s) Manual scale	Up to 3 instance(s) Manual scale	Up to 3 instance(s) Manual scale
234.36	468.72	937.44
MYR/MONTH (ESTIMATED)	MYR/MONTH (ESTIMATED)	MYR/MONTH (ESTIMATED)
<b>F1 Free</b>	<b>D1 Shared*</b>	
- Shared infrastructure	- Shared infrastructure	
1 GB Storage	1 GB Storage	

Select

After the advance of making the SQL database has been finished, the assets aggregate classification will then show a "ShipDatabase" asset. Inside the asset gathering, it contains two unique records, which are the DBMaerskLine-SoutheastAsia (SQL DB) and furthermore the DBMaerskLine-WestUS (SQL DB).

Home > SQL databases

SQL databases

Asia Pacific University

+ Add

Edit columns

Refresh

Assign Tags

Delete

Subscriptions: Free Trial

Filter by name...

All resource groups

All locations

No grouping

2 items

<input type="checkbox"/>	NAME	STATUS	REPLICATION ROLE	SERVER	PRICING TIER	LOCATION	SUBSCRIPTION	
<input type="checkbox"/>	DBMaerskLine-SoutheastAsia-TP035427	Online	Primary	maerskline-southeast-asia	Standard S1: 20 DTUs	Southeast Asia	Free Trial	...
<input type="checkbox"/>	DBMaerskLine-SoutheastAsia-TP035427	Online	Secondary	maersk-westus2	Standard S1: 20 DTUs	West US 2	Free Trial	...

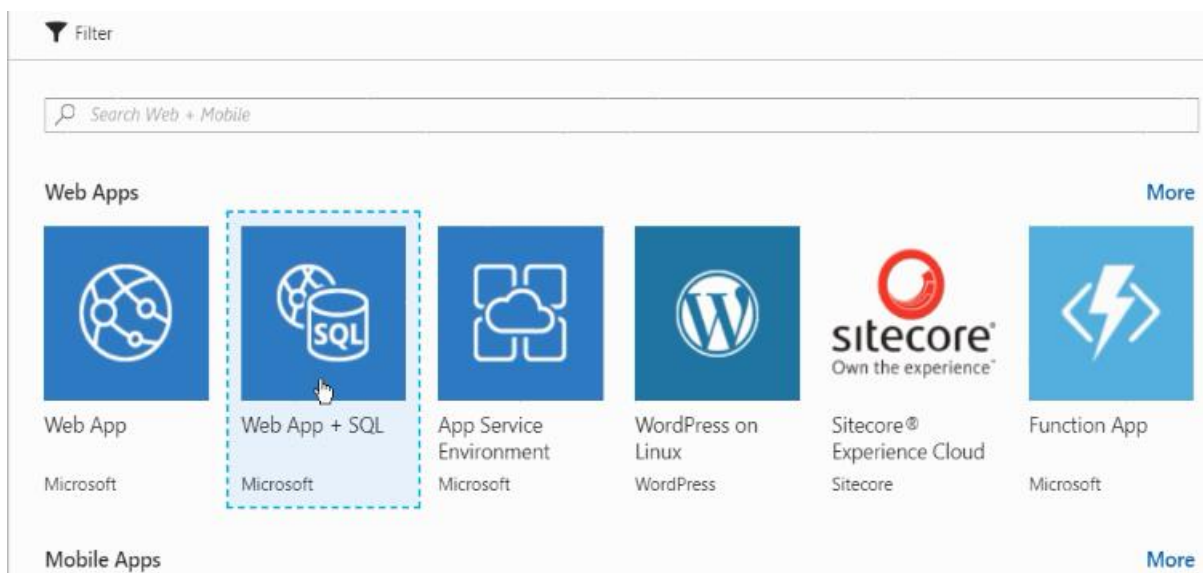
Once the server has been done the client will require needs to go to the "Geo Replication" and interface the databases on the two districts.



When it has been associated it will have an unmistakable line as expressed on the highest point of the photo.



Once that is done the client should Create the Web application and furthermore the Sql. The client should choose from the "Internet App + SQL".



Once the client has chosen the "Internet App + SQL" the client should fill in the greater part of the required spaces that are required.

Home > App Services > Web + Mobile > Web App + SQL > Web App + SQL > App Service plan

### Web App + SQL

Create

\* App name  
MaerskLineTP035427SoutheastAsiaWebapp ✓  
.azurewebsites.net

\* Subscription  
Free Trial

\* Resource Group ⓘ  
☐ Create new ☒ Use existing  
MaerskSouthEast.Asia-TP035427

\* App Service plan/Location  
ServicePlan9900e206-a174(Centr... >

SQL Database  
Configure required settings ! >

Application Insights ⓘ

☐ Pin to dashboard

### App Service plan

Select a plan for the web app

An App Service plan is the container for your app. The App Service plan settings will determine the location, features, cost and compute resources associated with your app.

+ Create new

ServicePlan9900e206-a174(S1) (New)  
Central US New Plan

Once that is done the client should revive the application administrations to have the capacity to see both of the web applications.

Home > App Services

### App Services

Asia Pacific University

+ Add Edit columns Refresh Assign Tags Start Restart Stop Delete

Subscriptions: Free Trial

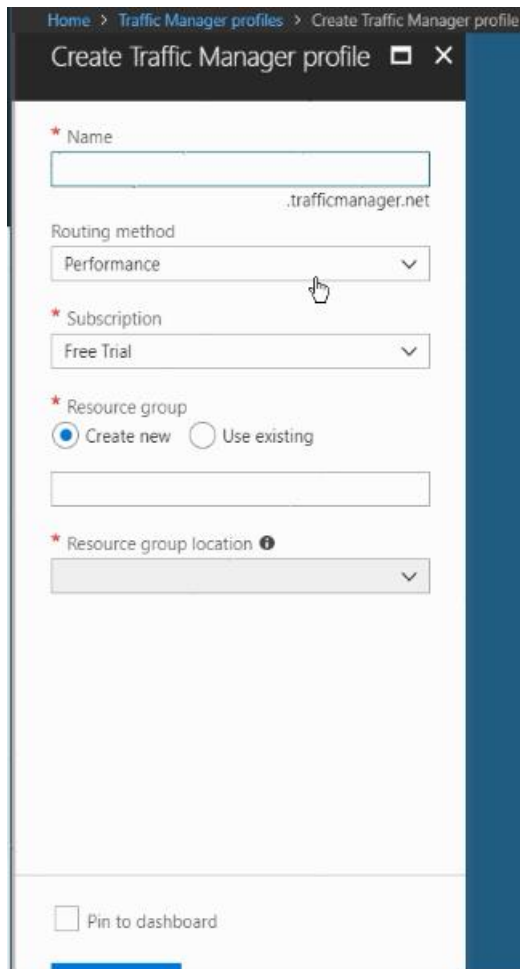
Filter by name... All resource groups All locations No grouping

2 items

<input type="checkbox"/>	NAME ↑	STATUS	APP TYPE	APP SERVICE PLAN	LOCATION ↑	SUBSCRIPTION ↑	
<input type="checkbox"/>	MaerskLineTP035427SoutheastAsiaWebapp	Running	Web app	S1-SoutheastAsia	Southeast Asia	Free Trial	...
<input type="checkbox"/>	MaerskLineTP035427WestUSWebapp	Running	Web app	S1-West	West US 2	Free Trial	...

## 4.2 Traffic Manager

Microsoft Azure Traffic Manager enables you to control the conveyance of client movement for benefit endpoints in various datacenters. Administration endpoints upheld by Traffic Manager incorporate Azure VMs, Web Apps, and cloud administrations.



The screenshot shows the 'Create Traffic Manager profile' form in the Azure portal. The breadcrumb navigation at the top reads 'Home > Traffic Manager profiles > Create Traffic Manager profile'. The form title is 'Create Traffic Manager profile' with a close button. The form contains the following fields:

- Name:** A text input field with a red asterisk indicating it is required. Below the field, the text '.trafficmanager.net' is displayed.
- Routing method:** A dropdown menu with 'Performance' selected and a downward arrow.
- Subscription:** A dropdown menu with 'Free Trial' selected and a downward arrow.
- Resource group:** A section with two radio buttons: 'Create new' (selected) and 'Use existing'. Below the radio buttons is an empty text input field.
- Resource group location:** A dropdown menu with a red asterisk and an information icon. The dropdown is currently empty.

At the bottom of the form, there is a checkbox labeled 'Pin to dashboard' which is currently unchecked.

The user must fill in all the blank provided then proceed.



Home > Traffic Manager profiles > Create Traffic Manager profile

## Traffic Manager profiles

Asia Pacific University

+ Add Edit columns More

Filter by name...

NAME

No Traffic Manager profiles to display

Create a Traffic Manager profile to define the routing method used to distribute user traffic to service endpoints in different datacenters. Distribute traffic to your endpoints by performance, weighted value, priority, or geography. Traffic Manager endpoints can be Azure virtual machines, web apps, cloud services, and external non-Azure endpoints. [Learn more](#)

Create Traffic Manager profiles

### Create Traffic Manager profile

\* Name  
MaerskLineTP035427SoutheastAsiaTMpro...  
.trafficmanager.net

Routing method  
Performance

\* Subscription  
Free Trial

\* Resource group  
☐ Create new ☒ Use existing  
MaerskTP035427TrafficManager

\* Resource group location  
Southeast Asia

☐ Pin to dashboard

When the greater part of the data has been filled in the client will then need to tap the "Make" and Traffic Manager is then made.

Home > Traffic Manager profiles > MaerskLineTP035427SoutheastAsiaTMprofile

## Traffic Manager profiles

Asia Pacific University

+ Add Edit columns Refresh Assign Tags

Subscriptions: Free Trial

Filter by name... All resource groups All locations No grouping

1 items

<input type="checkbox"/>	NAME	STATUS	ROUTING METHOD	RESOURCE GROUP	SUBSCRIPTION
<input type="checkbox"/>	MaerskLineTP035427SoutheastAsiaTMprofile	Enabled	Performance	MaerskTP035427TrafficManager	Free Trial

Once the client has done it accurately this will show up in the client Traffic Manager Profile.

Home > Traffic Manager profiles > MaerskLineTP035427SoutheastAsiaTMprofile - Endpoints > Add endpoint

### Add endpoint

MaerskLineTP035427SoutheastAsiaTMprofile

Type ⓘ  
Azure endpoint

\* Name  
MaerskLineTP035427SoutheastAsiaEndPoint ✓

Target resource type  
App Service

\* Target resource  
MaerskLineTP035427SoutheastAsiaWebapp >

☐ Add as disabled

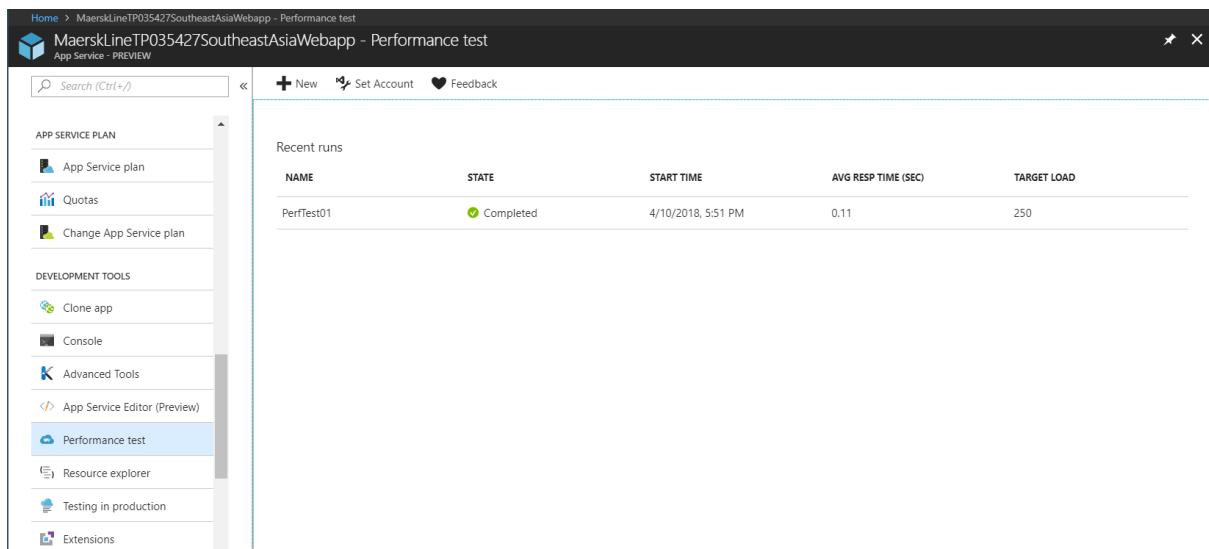
The client will then need to go into the Traffic Manager Profile and the client will then make an End Point for the Traffic Manager. Once that is done the client will have the capacity to distribute the site.

### 4.3 Performance Testing

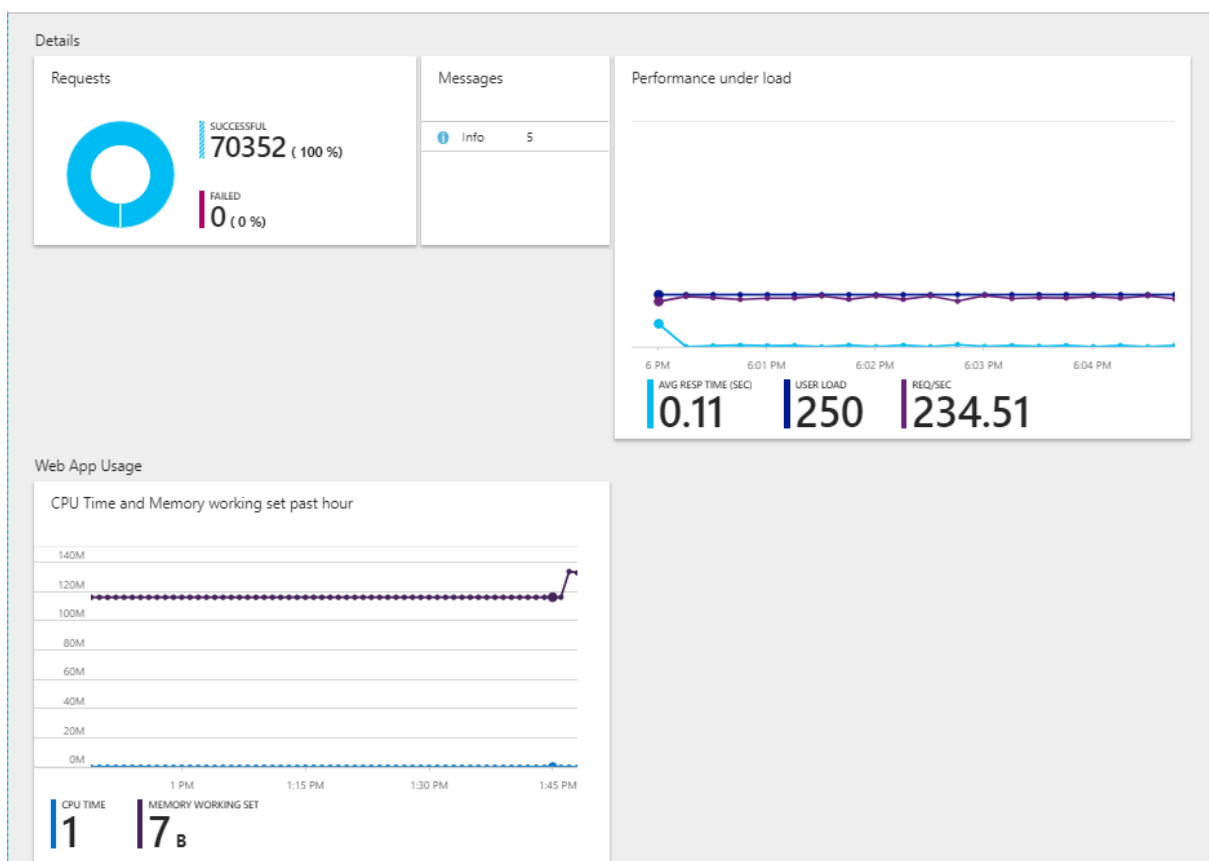
Performance testing is the way toward deciding the speed or viability of a PC, arrange, programming project or gadget. This procedure can include quantitative tests done in a lab, for example, estimating the reaction time or the quantity of MIPS (a large number of directions every second) at which a framework capacity.

The screenshot shows the 'New performance test' configuration interface. The breadcrumb trail at the top reads: Home > App Services > MaerskLineTP035427SoutheastAsiaWebapp - Performance test > New performance. The window title is 'New performance test' with a 'PREVIEW' tab. A dashed box highlights the 'CONFIGURE TEST USING' button, which shows 'Test type: ManualTest 1 Url'. Below this, the 'NAME' field contains 'PerfTest01'. The 'GENERATE LOAD FROM' dropdown is set to 'Southeast Asia (Web app Location)'. The 'USER LOAD' field is set to '250'. The 'DURATION (MINUTES)' field is set to '5'. A large blue area on the right side of the window is currently blank.

In this segment, the client should lead an execution test to test the general execution of the web application. At in the first place, the client should give a name to the execution test. Also, the client will be required select the area that the heap produced from and the span of the framework itself should stack the page in the meantime. Besides, this test will then be led in three diverse client loads, which includes on a normal of 250 clients, 500 clients, and 100 clients.



The figure above demonstrates the rundown of the finished execution test on the web application itself. Additionally, the client will have the capacity to see the test by tapping on it.



As the figure above shows, the finished test with 250 client loads. It plainly delineates that the quantity of effective demand are immaculate and it just bombed once on the general execution.

## 4.4 Web Application Screenshot



The figure above demonstrates the landing page of Maersk Line Company. This landing page is appeared after the administrator has login effectively to the site. In addition, it likewise gives a few highlights to the administrator to play out the activities, for example, make reservation, compartment, oversee ship, and shipyards.

Log in.

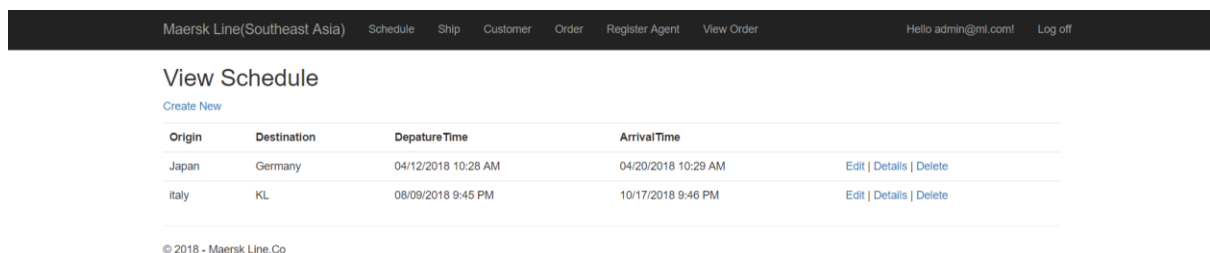
Please enter your e-mail and Password.

The login form contains the following elements:

- Email:** A text input field with the value 'admin@ml.com'.
- Password:** A password input field with masked characters '\*\*\*\*\*'.
- Remember me?:** A checkbox.
- Log in:** A button.

At the bottom of the form, there is a copyright notice: '© 2018 - Maersk Line.Co'.

The figure above demonstrates the login page of Maersk Line Company. This login page is appeared before the administrator has login effectively to the site.



After client has tapped on the 'Calendar' tab, which is appeared at the highest point of the web application, the framework will show the Schedule page. Along these lines, this page enables client to make another Schedule. It will likewise show the rundown of starting point,

Maersk Line(Southeast Asia)

Schedule

Ship

Customer

Order

Register Agent

View Order

Hello admin@ml.com!

Log off

View Ship

Create New

ShipName	ShipContainerNumber
MaerskCO	123056
Help	1234505

© 2018 - Maersk Line.Co

Maersk Line(Southeast Asia)

Schedule

Ship

Customer

Order

Register Agent

View Order

Hello admin@ml.com!

Log off

## List of customer

Create New

Name	Email	ContactNumber	
Benny	Benny@AOL.com	0123456722	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>
Ken	ken@mail.com	01232332323	<a href="#">Edit</a>   <a href="#">Details</a>   <a href="#">Delete</a>

© 2018 - Maersk Line.Co

Maersk Line(Southeast Asia)

Schedule

Ship

Customer

Order

Register Agent

View Order

Hello admin@ml.com!

Log off

SelectContainer

Schedule ID	Schedule Origin	Schedule Destination	Schedule Departure Time	Schedule Arrival Time
1	Japan	Germany	04/12/2018 10:28 AM	04/20/2018 10:29 AM

Ship ID	Ship Name	Ship Container Number
1	MaerskCO	123056

Name	Email	ContactNumber
Benny	Benny@AOL.com	0123456722

New Container

Type of Container

Judas

Weight of Container

445

Create Booking

Once that is done the client should go to the Order tab whereby this tab will enable the client to choose the Container which is through the Schedule, Ship and furthermore the Customer. When the majority of that has been chosen the client must fill in the kind of holder and furthermore the heaviness of compartment.

Maersk Line(Southeast Asia)
Schedule
Ship
Customer
Order
Register Agent
View Order
Hello admin@ml.com!
Log off

Register.  
Create a new account.

Email

Password

Confirm password

Register

© 2018 - Maersk Line.Co

Additionally, if there the administrator will likewise have the power or benefit to add new specialists to the framework also if that is required.

Maersk Line(Southeast Asia)
Schedule
Ship
Customer
Order
Register Agent
View Order
Hello admin@ml.com!
Log off

ViewBooking

Create New Order

Order ID	Order Agent	Customer ID	Customer Name	Customer Email	Customer Contact Number	Ship ID	Ship Name	Ship Container Space	Container ID	Type of Container	Weight of Container	Schedule ID	Schedule Origin	Schedule Destination	Schedule Departure Date Time	Schedule Arrival Date Time
1	admin@ml.com	1	Benny	Benny@AOL.com	0123456722	1	MaerskCO	123056	1	Shoes	400	1	Japan	Germany	04/12/2018 10:28 AM	04/20/2018 10:29 AM
2	admin@ml.com	2	Ken	ken@mail.com	01232332323	2	Help	1234505	2	Jey	50	2	Italy	KL	08/09/2018 9:45 PM	10/17/2018 9:46 PM

© 2018 - Maersk Line.Co

At the point when client taps the "View Order" tab which is situated at the highest point of the web application, the framework will open this page. This page will demonstrate the greater part of the records that the administrator had made for the booking for the shipments. Consequently, the administrator permits reserving a spot which is situated underneath the Reservation title. Other than that, the administrator is additionally ready to see and erase the records.

## 5.0 Unit Testing

Test ID	Test Description	Test Data	Expected Result	Actual Result	Status
T1	Login	Username: admin@ml.com	Login	Login	Pass
		Password: Admin_123	Successful	Successful	
T2	Insert Reservation	1P778, JustShip, Japan, Tokyo, 100, 18-Jul-2018, 19-Jul-2018	Insert	Insert	Pass
			Successful	Successful	
T3	Insert Ship	JustShip, Hope400, 1234	Insert	Insert	Pass
			Successful	Successful	
T4	Insert Container	1P778, Not more than 500KG, 500	Insert	Insert	Pass
			Successful	Successful	
T5	Update Reservation	1, Titanic, KUL-SG BESI, LGK-PAHANG, 100, 18-Jul-2017, 20-Jul-2017	Update	Update	Pass
			Successful	Successful	
T6	Update Ship	Titanic, MH100, 1100	Update	Update	Pass
			Successful	Successful	
T7	Update Container	1, Not more than 1000KG, 1000	Update	Update	Pass
			Successful	Successful	
T8	Delete Booking	-	Delete	Delete	Pass
			Successful	Successful	
T9	Delete Ship	-	Delete	Delete	Pass
			Successful	Successful	
T10	Delete Container	-	Delete	Delete	Pass
			Successful	Successful	



## 6.0 Conclusion

Taking everything into account, Maerks Line web application enables the client to reserve spot for shipment, and furthermore ready to make holder, shipyards, and oversee ships. The web application is produced in view of the prerequisite that expressed in the task question paper. Furthermore, this web application has accomplished to objective of giving a decent stage to the client to deal with the shipment.

Microsoft Azure is a decent stage for the web application to send on it. This stage gives an awesome answer for the Maerks Line Company as it addresses the issues of Maerks Line web application. Plus, it is simple and helpful for the product designer to send their web application with couple of straightforward advances. Dissimilar to the others stage, it just takes couple of minutes to convey the web application to the cloud. Not just that, Microsoft Azure additionally gives SQL Database that assists a ton of programming designer with solving the issue of putting away the information. Keeping in mind the end goal to ensure that the site can be come to much of the time, Azure Traffic Manager is actualized to control the solicitations from web customers. Execution movement steering is chosen by sending endpoints in couple of areas over the globe. This is to enhance the responsiveness of the web application and send the demand in view of the area that is nearest to the customer.

The product designer had picked up heaps of information around there, which is create and send the web application on Microsoft Azure App Service, and movement control. In this task, I had taken in the web application organization, movement control, and other valuable capacities. I trust that I could apply it in my future employments and help to enhance my profession as it gives numerous valuable highlights.

## 7.0 Appendix

Github

[https://github.com/oubamanhs/DDAC\\_TP035427](https://github.com/oubamanhs/DDAC_TP035427)

South East Asia

<https://maersklinetp035427southeastasiawebapp.azurewebsites.net/>

West US

<https://maersklinetp035427westuswebapp.azurewebsites.net/>