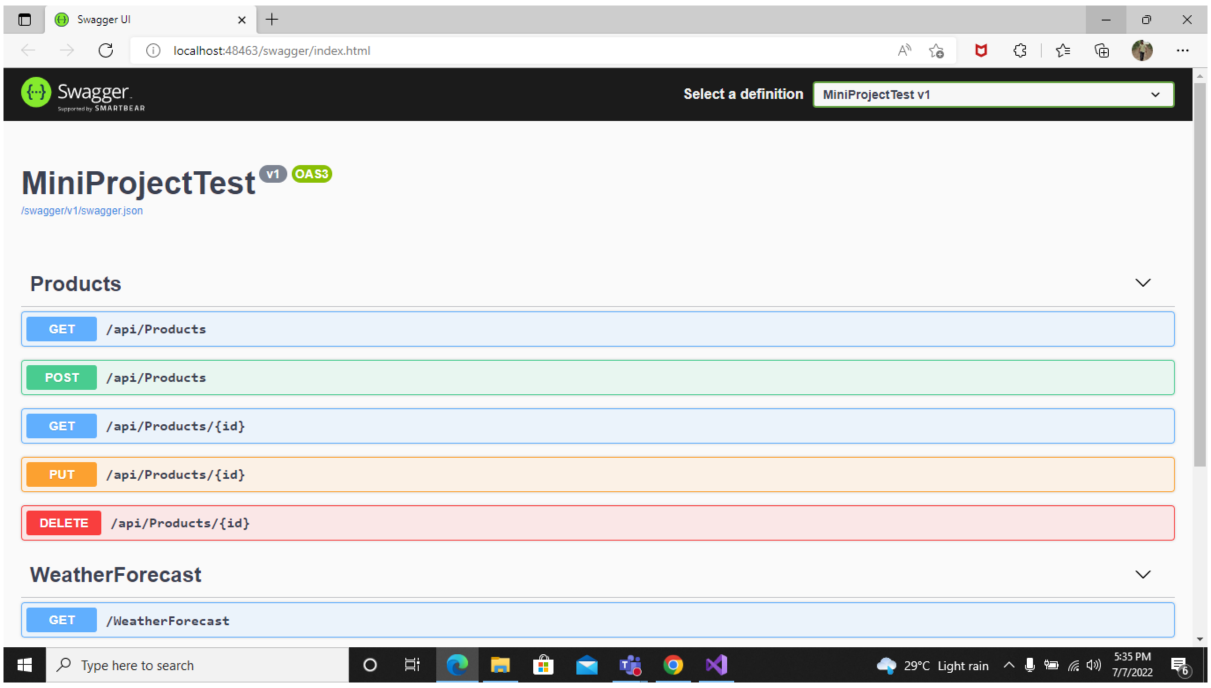
Final Project Documentation

Steps:

1. Started with a new project on visual studo, with project type as **ASP.NET Core Web API**.
2. Created a new **Folder** called **Models** with class **Products** with the given specifications, added all the **validation attributes** on to the fields of the Product class.
3. Added required **Entity Framework** libraries using **NuGet Package** manager.
4. Performed data base **migration** operations on PS console.
5. Added a **controller** by right clicking on the projct and selecting the option Conroller, created the conroller for the Products model, by using scaffolding feature of Visual Studio.
6. **Tested** the **API** with the default end point weather forecast by publishing it into the **Azure App Services**.
7. The **JQuery AJAX** calls (REST Client) or **Index.html** page is **hosted** on the **same server** in which the Web API is running with path StaticFiles/index.html.
8. Index.html page is written to perform the **HTTP calls** using JQuery library (AJAX Calls).


Swagger UI

localhost:48463/swagger/index.html

Select a definition: MiniProjectTest v1

MiniProjectTest v1 OAS3

/swagger/v1/swagger.json

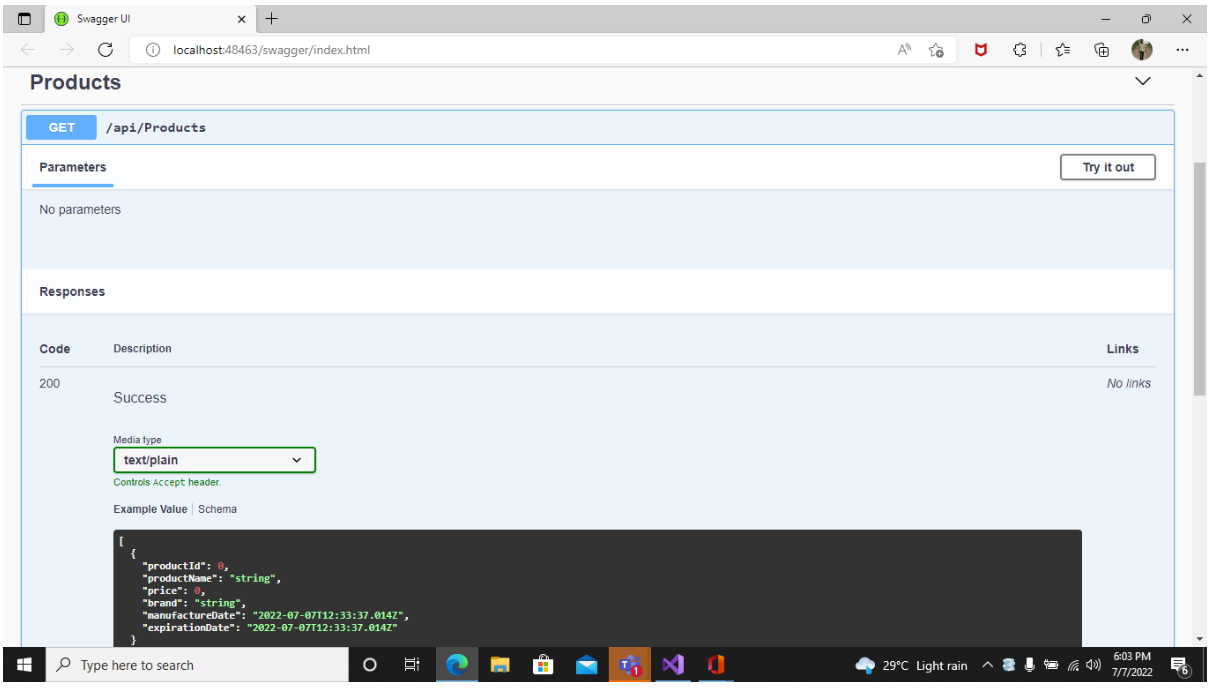
Products

```
GET     /api/Products
POST    /api/Products
GET     /api/Products/{id}
PUT     /api/Products/{id}
DELETE  /api/Products/{id}
```

WeatherForecast

```
GET     /WeatherForecast
```

1. Screen shot showing swagger documentation for the created Products Web API project.


Swagger UI

localhost:48463/swagger/index.html

Products

GET /api/Products

Parameters

No parameters

Responses

Code	Description	Links
200	Success	No links

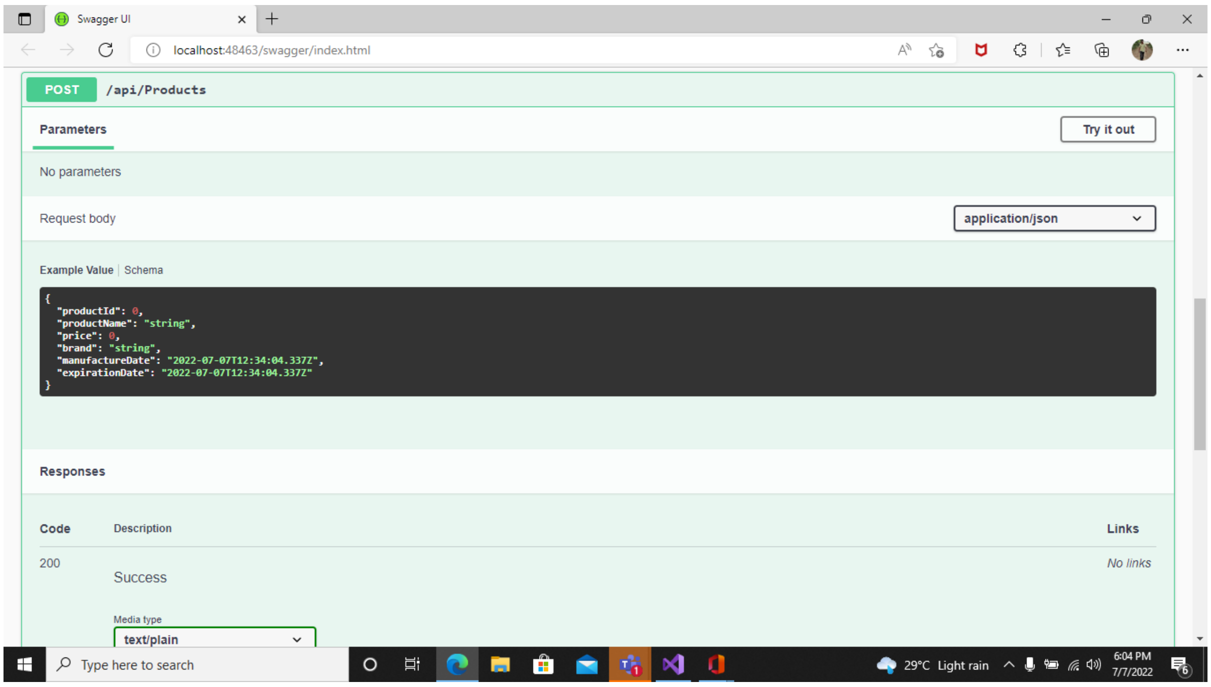
Media type: text/plain

Controls Accept header.

Example Value | Schema

```
[
  {
    "productId": 0,
    "productName": "string",
    "price": 0,
    "brand": "string",
    "manufactureDate": "2022-07-07T12:33:37.014Z",
    "expirationDate": "2022-07-07T12:33:37.014Z"
  }
```

2. Screen shot showing the get call documentation for the Products API.


POST /api/Products

Parameters

No parameters

Request body: application/json

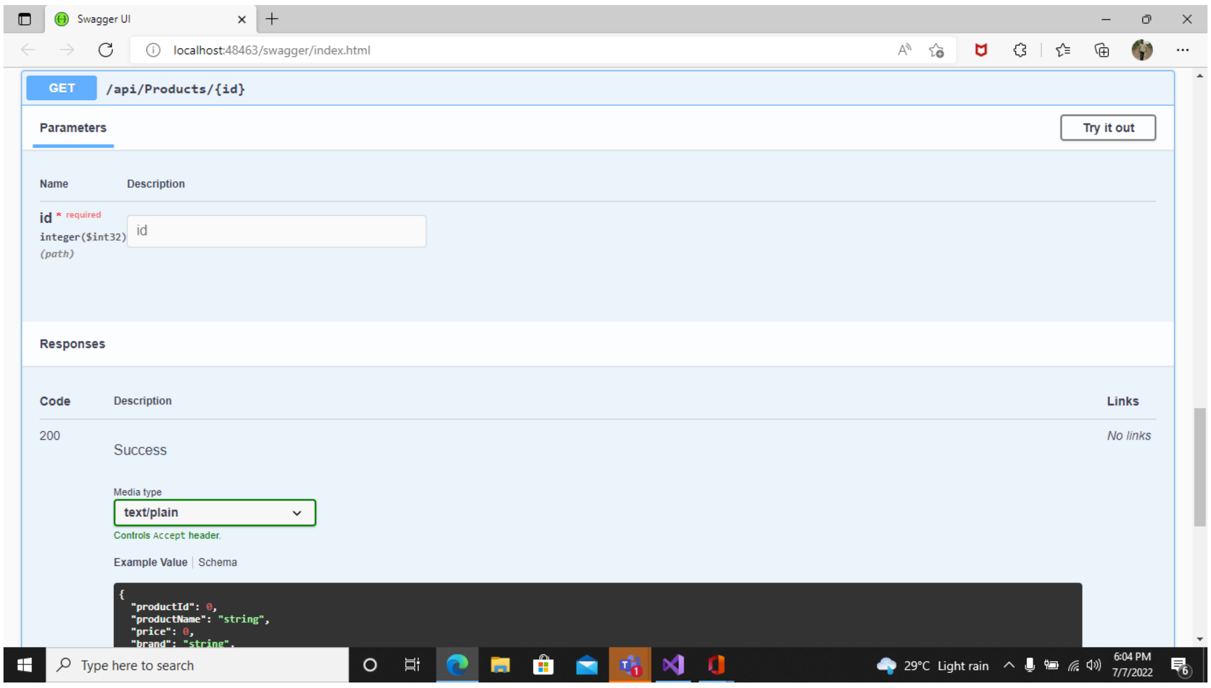
Example Value | Schema

```
{
  "productId": 0,
  "productName": "string",
  "price": 0,
  "brand": "string",
  "manufactureDate": "2022-07-07T12:34:04.337Z",
  "expirationDate": "2022-07-07T12:34:04.337Z"
}
```

Responses

Code	Description	Links
200	Success Media type: text/plain	No links

3. Screen shot showing the post call for creating a new product.


GET /api/Products/{id}

Parameters

Name	Description
id * required integer($int32) (path)	id

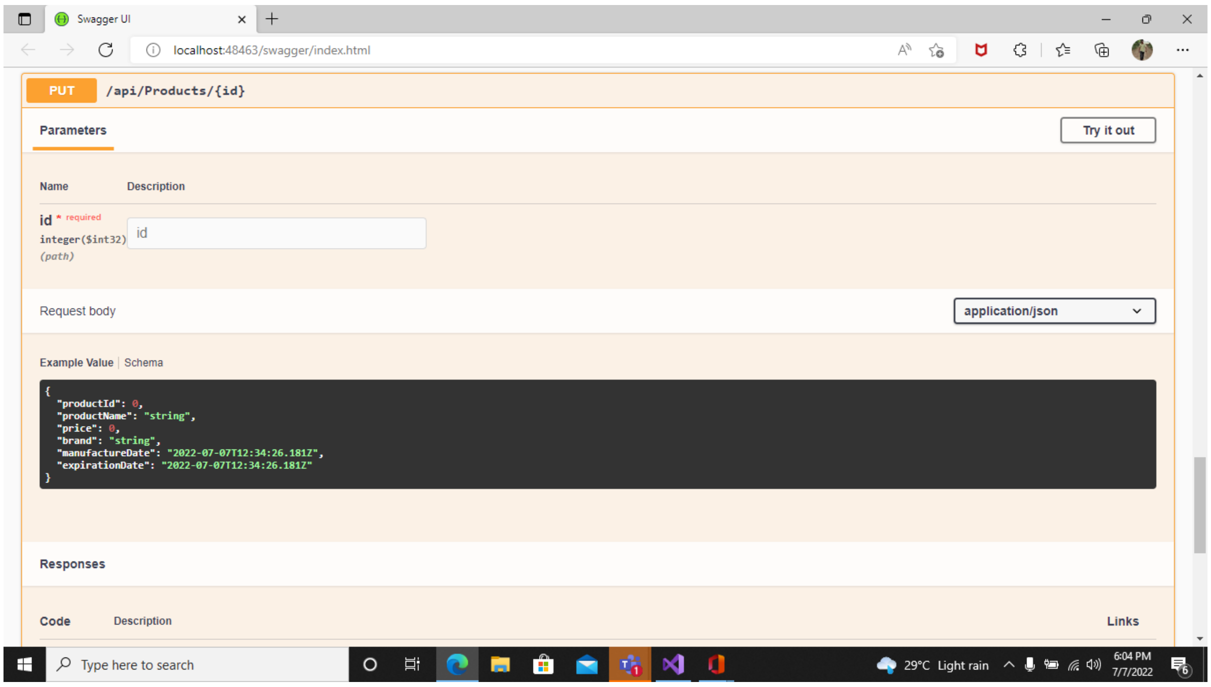
Responses

Code	Description	Links
200	Success Media type: text/plain Controls Accept header.	No links

Example Value | Schema

```
{
  "productId": 0,
  "productName": "string",
  "price": 0,
  "brand": "string",
```

4. Screen shot showing the get call for a product with specified product id passed as a path variable.



/api/Products/{id}

Parameters

Name	Description
id * required integer($int32) (path)	id

Request body application/json

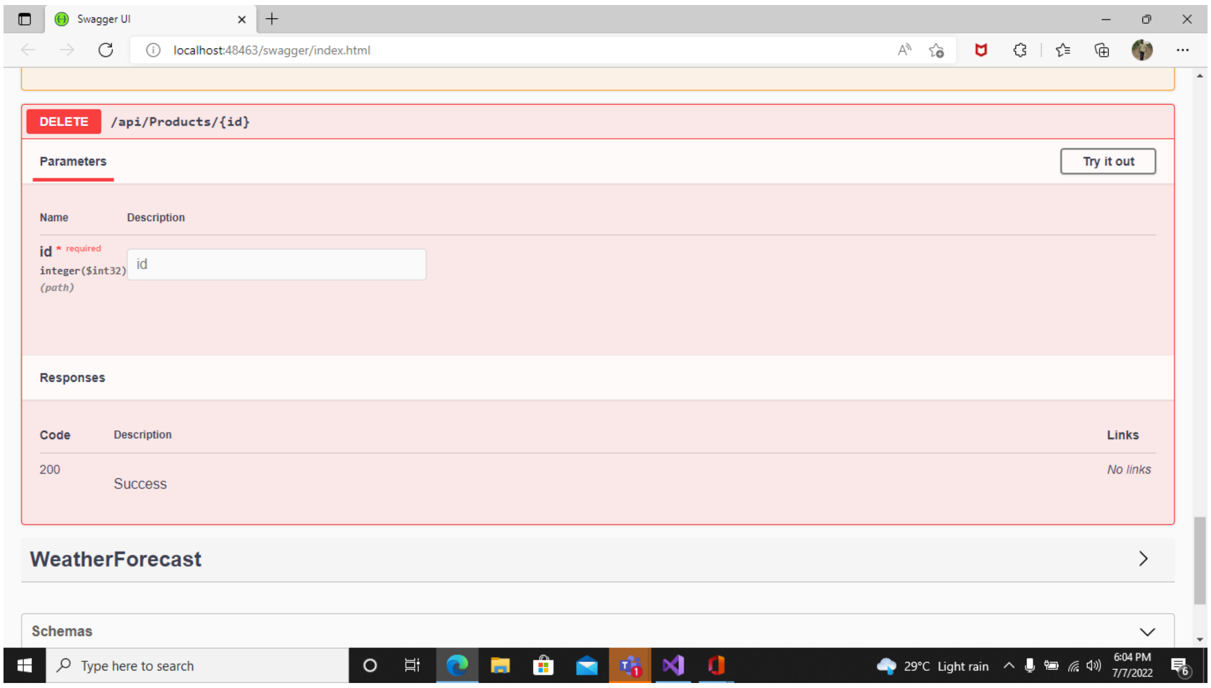
Example Value | Schema

```
{
  "productId": 0,
  "productName": "string",
  "price": 0,
  "brand": "string",
  "manufactureDate": "2022-07-07T12:34:26.181Z",
  "expirationDate": "2022-07-07T12:34:26.181Z"
}
```

Responses

Code	Description	Links

5. Screen shot showing the put call for updating an existing product with request body (fields to be updated) and path variable as product id.



/api/Products/{id}

Parameters

Name	Description
id * required integer($int32) (path)	id

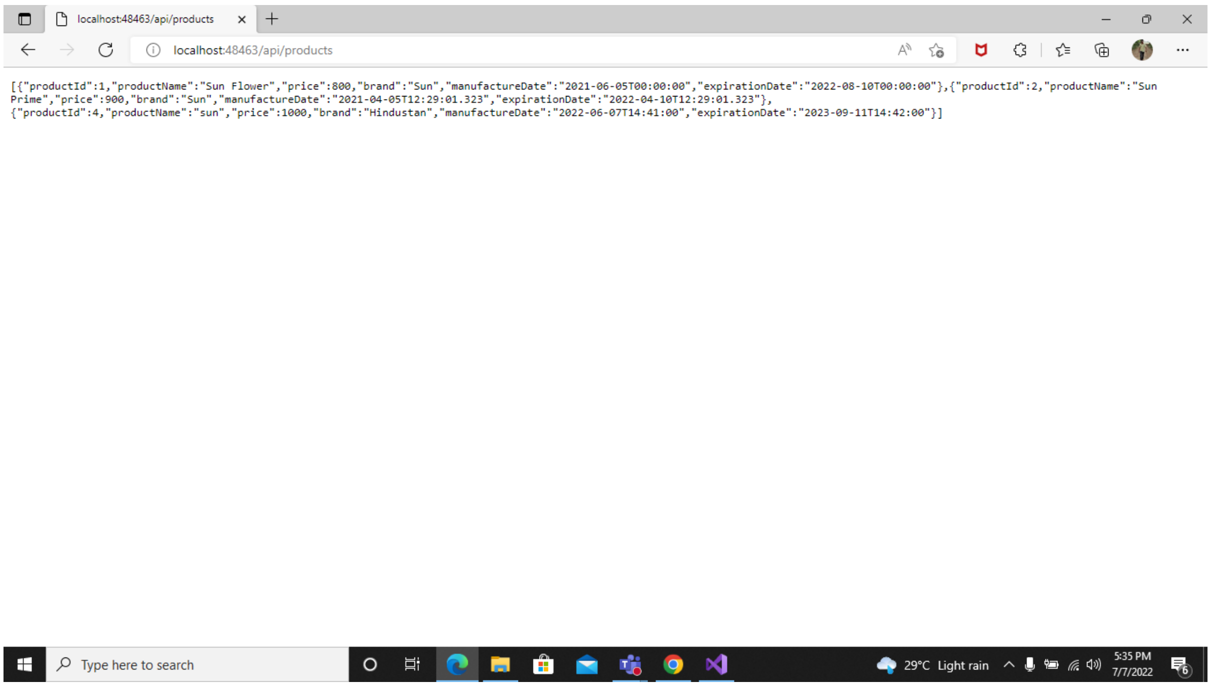
Responses

Code	Description	Links
200	Success	No links

WeatherForecast

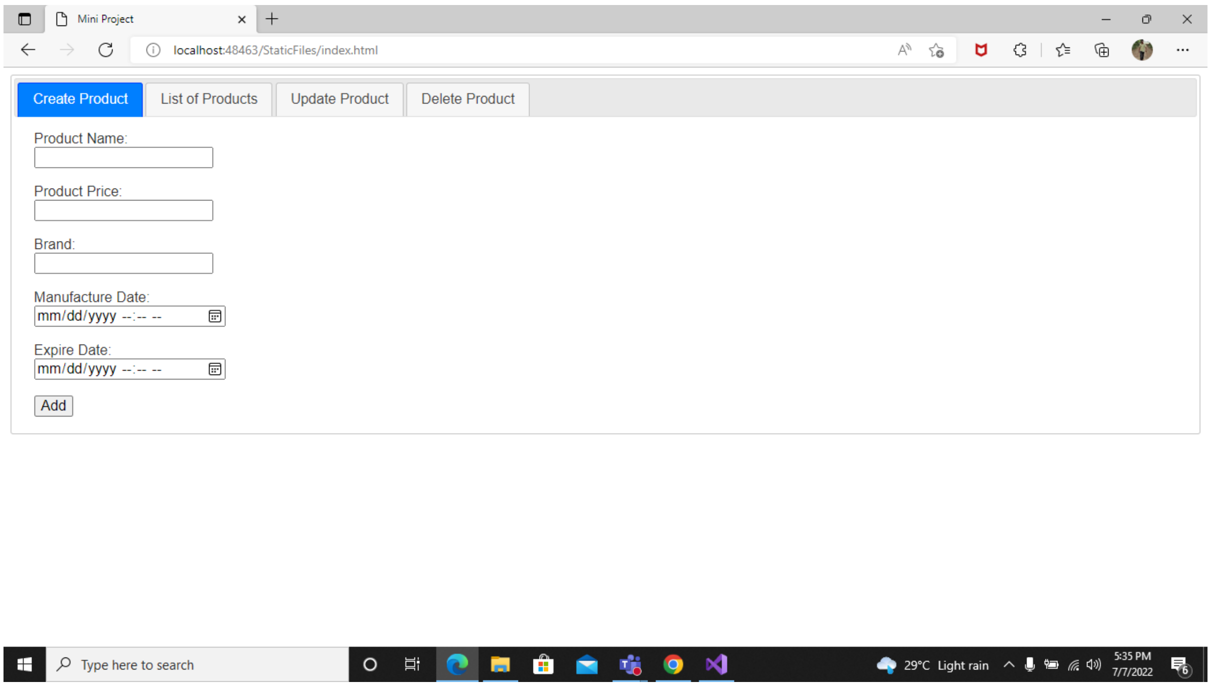
Schemas

6. Screen shot showing the delete call for deleting an existing product with the specified id passed as a path variable.



```
[{"productId":1,"productName":"Sun Flower","price":800,"brand":"Sun","manufactureDate":"2021-06-05T00:00:00","expirationDate":"2022-08-10T00:00:00"},{"productId":2,"productName":"Sun
Prime","price":900,"brand":"Sun","manufactureDate":"2021-04-05T12:29:01.323","expirationDate":"2022-04-10T12:29:01.323"},
{"productId":4,"productName":"sun","price":1000,"brand":"Hindustan","manufactureDate":"2022-06-07T14:41:00","expirationDate":"2023-09-11T14:42:00"}]
```

7. Screen shot showing list of products by using get call to the end point localhost:48463/api/products. The return value is a list of product objects in json format.



Product Name:

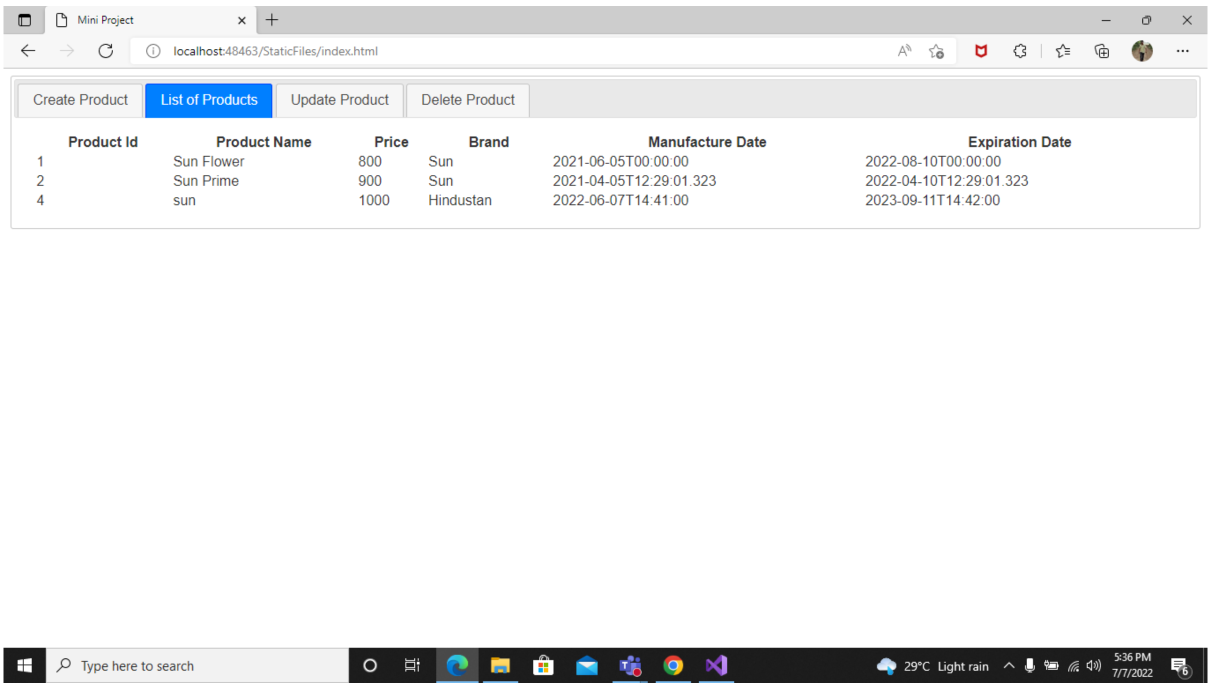
Product Price:

Brand:

Manufacture Date:
mm/dd/yyyy --:-- --

Expire Date:
mm/dd/yyyy --:-- --

8. Screen shot showing the index.html page for consuming the created products API using jquery library and with ajax calls. The form consists of product details with add button; by clicking add button a click event is raised and on the background an ajax call is performed to the post call of the API, with the entered form details in JSON format.

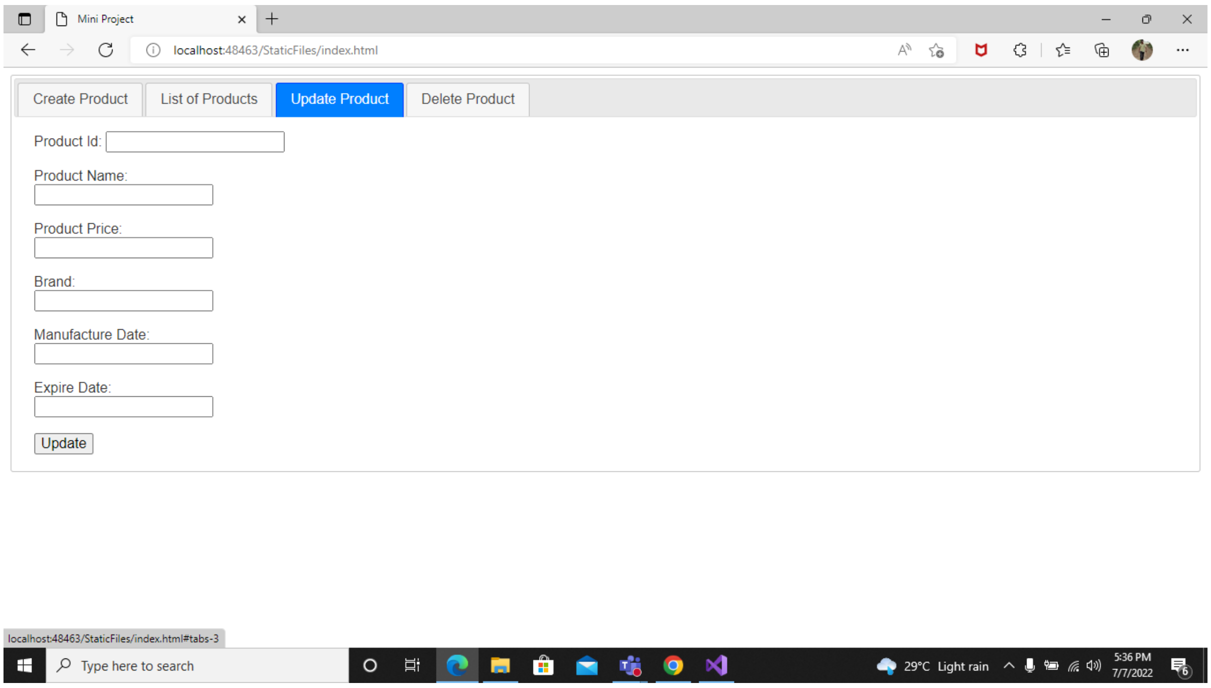

Mini Project

localhost:48463/StaticFiles/index.html

Create Product | List of Products | Update Product | Delete Product

Product Id	Product Name	Price	Brand	Manufacture Date	Expiration Date
1	Sun Flower	800	Sun	2021-06-05T00:00:00	2022-08-10T00:00:00
2	Sun Prime	900	Sun	2021-04-05T12:29:01.323	2022-04-10T12:29:01.323
4	sun	1000	Hindustan	2022-06-07T14:41:00	2023-09-11T14:42:00

9. Screen shot showing the list of products on table which are created using post operation.


Mini Project

localhost:48463/StaticFiles/index.html

Create Product | List of Products | Update Product | Delete Product

Product Id:

Product Name:

Product Price:

Brand:

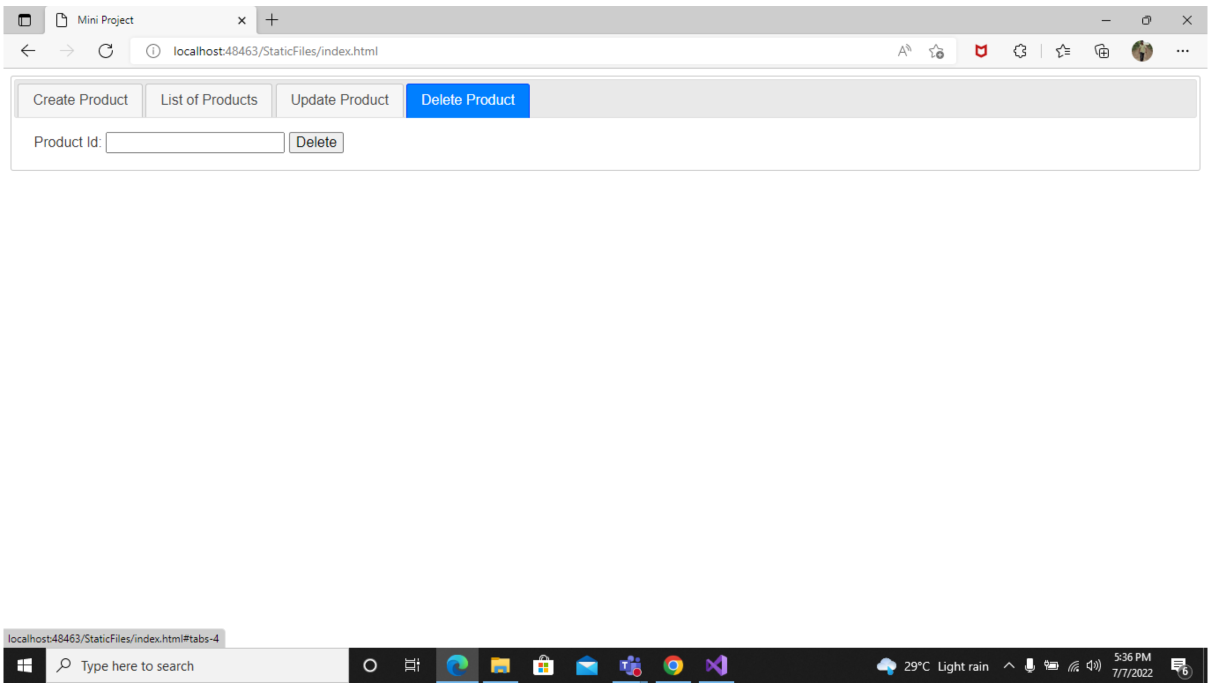
Manufacture Date:

Expire Date:

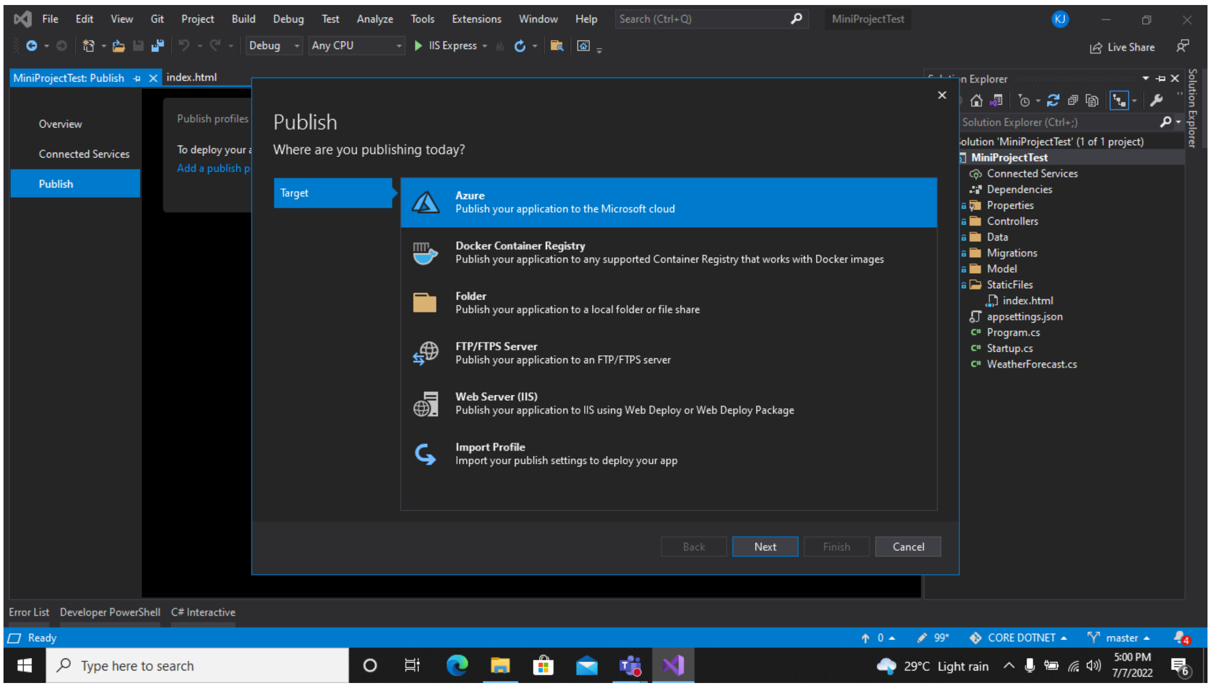
Update

localhost:48463/StaticFiles/index.html#tabs-3

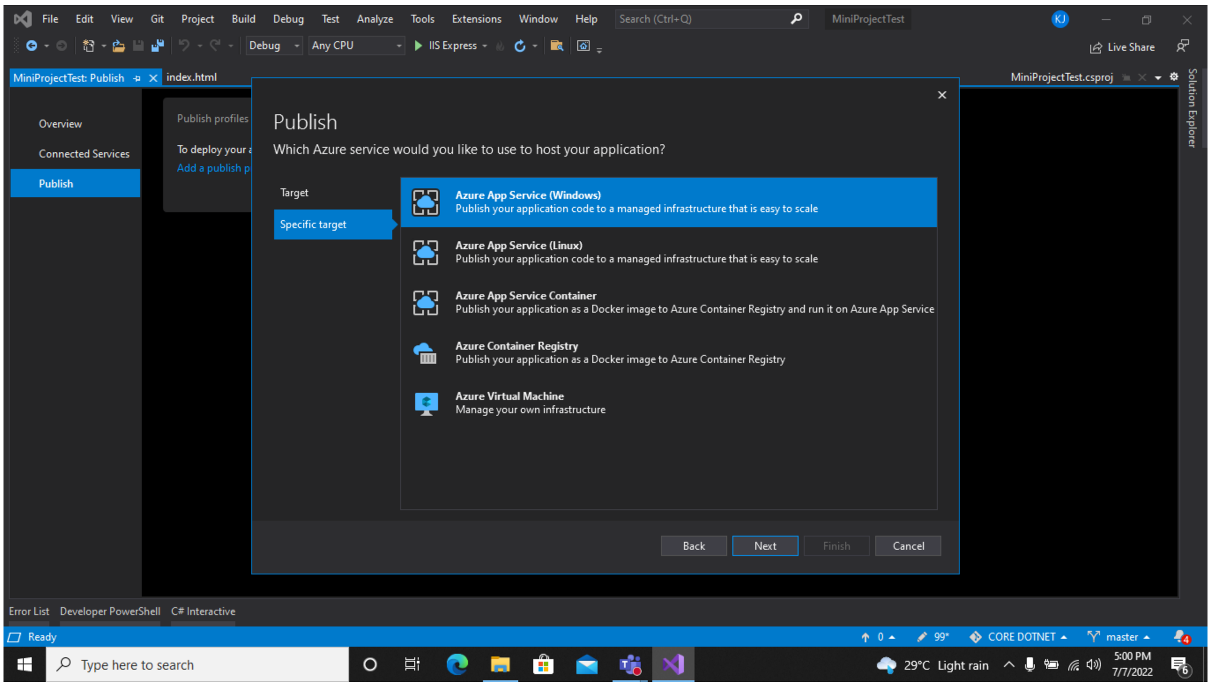
10. Scree shot showing a form containing products to update a product. At first we enter a product id on the text field the product details are populated on to the below text boxes, after editing fields, then we can click on update button. This will show an alert message when a product ID not exist.



11. Screen shot showing delete operation at first we enter product id on to text box and then click on delete product button, if the product exist with entered id then the product will be deleted and an alert is displayed, if the product is not available then it will alert by saying product not exist with the given id.


Publish
Where are you publishing today?
Target
Azure
Publish your application to the Microsoft cloud
Docker Container Registry
Publish your application to any supported Container Registry that works with Docker images
Folder
Publish your application to a local folder or file share
FTP/FTPS Server
Publish your application to an FTP/FTPS server
Web Server (IIS)
Publish your application to IIS using Web Deploy or Web Deploy Package
Import Profile
Import your publish settings to deploy your app
Back
Next
Finish
Cancel

12. Screen shot showing publish dialog box when publishing the created project.


Publish

Which Azure service would you like to use to host your application?

Azure App Service (Windows)
Publish your application code to a managed infrastructure that is easy to scale

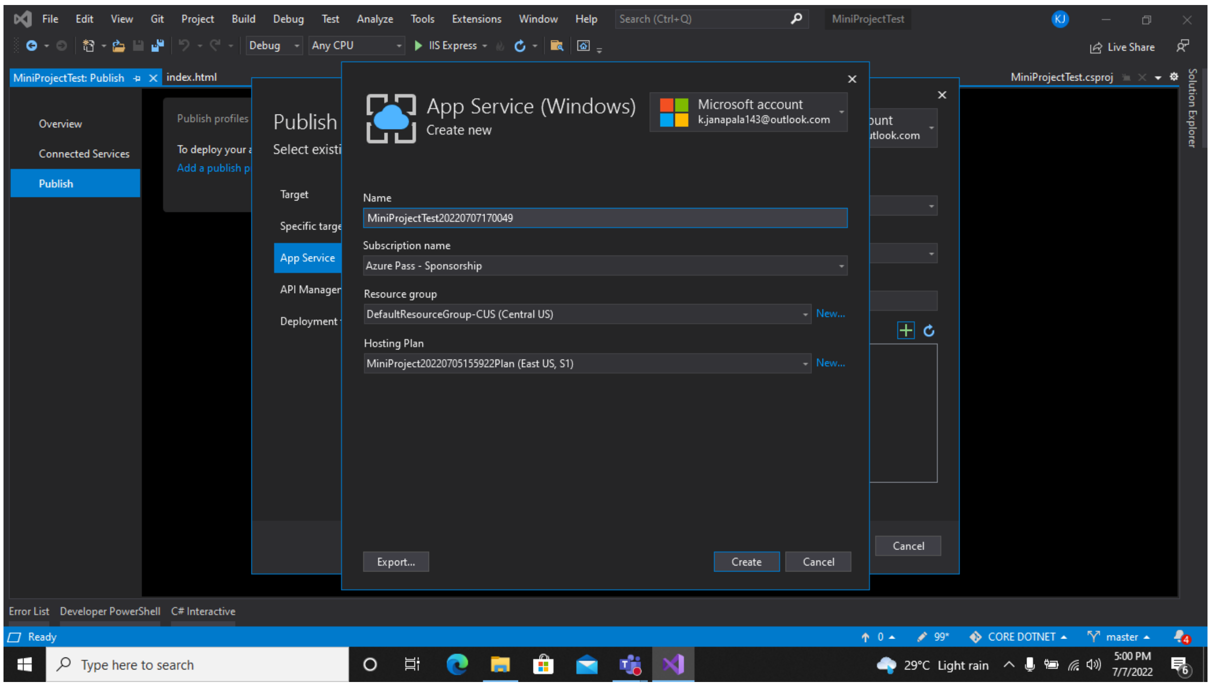
Azure App Service (Linux)
Publish your application code to a managed infrastructure that is easy to scale

Azure App Service Container
Publish your application as a Docker image to Azure Container Registry and run it on Azure App Service

Azure Container Registry
Publish your application as a Docker image to Azure Container Registry

Azure Virtual Machine
Manage your own infrastructure

13. Screen shot showing different targets for publishing the projects to the Azure.


App Service (Windows)
Create new

Microsoft account
k.janapala143@outlook.com

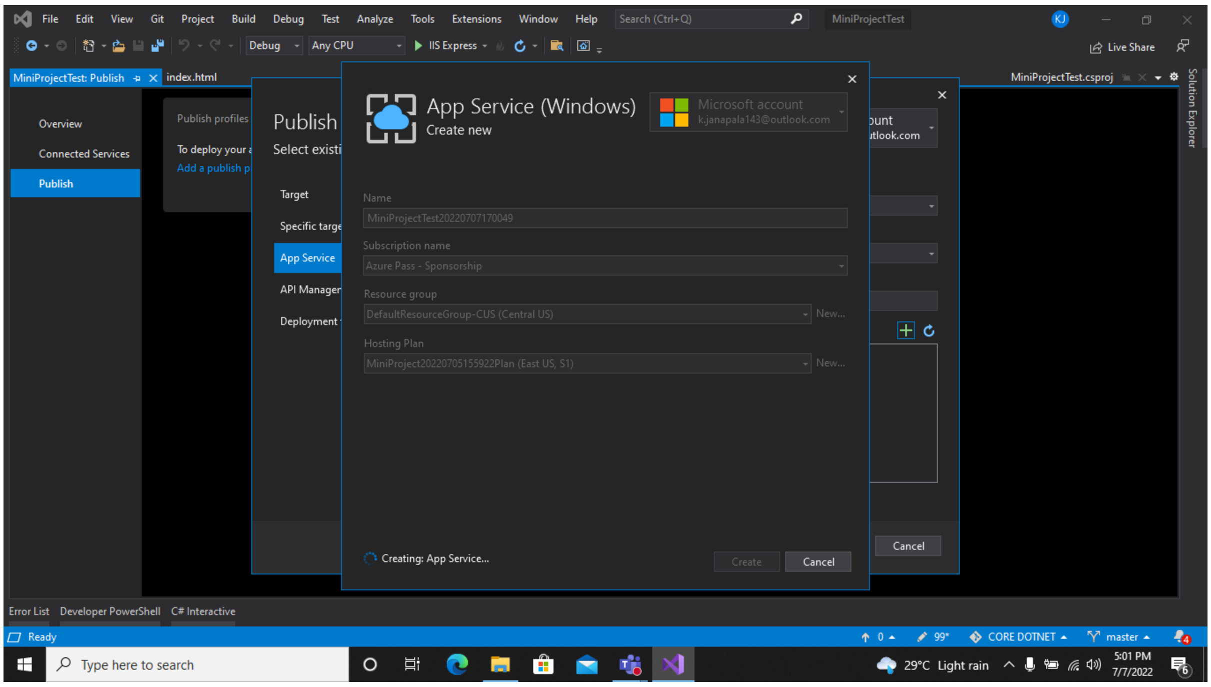
Name
MiniProjectTest20220707170049

Subscription name
Azure Pass - Sponsorship

Resource group
DefaultResourceGroup-CUS (Central US)

Hosting Plan
MiniProject20220705155922Plan (East US, S1)

14. Screen shot showing the selected platform specifications for the app service and resource group etc.


App Service (Windows)
Create new

Microsoft account
k.janapala143@outlook.com

Name: MiniProjectTest20220707170049

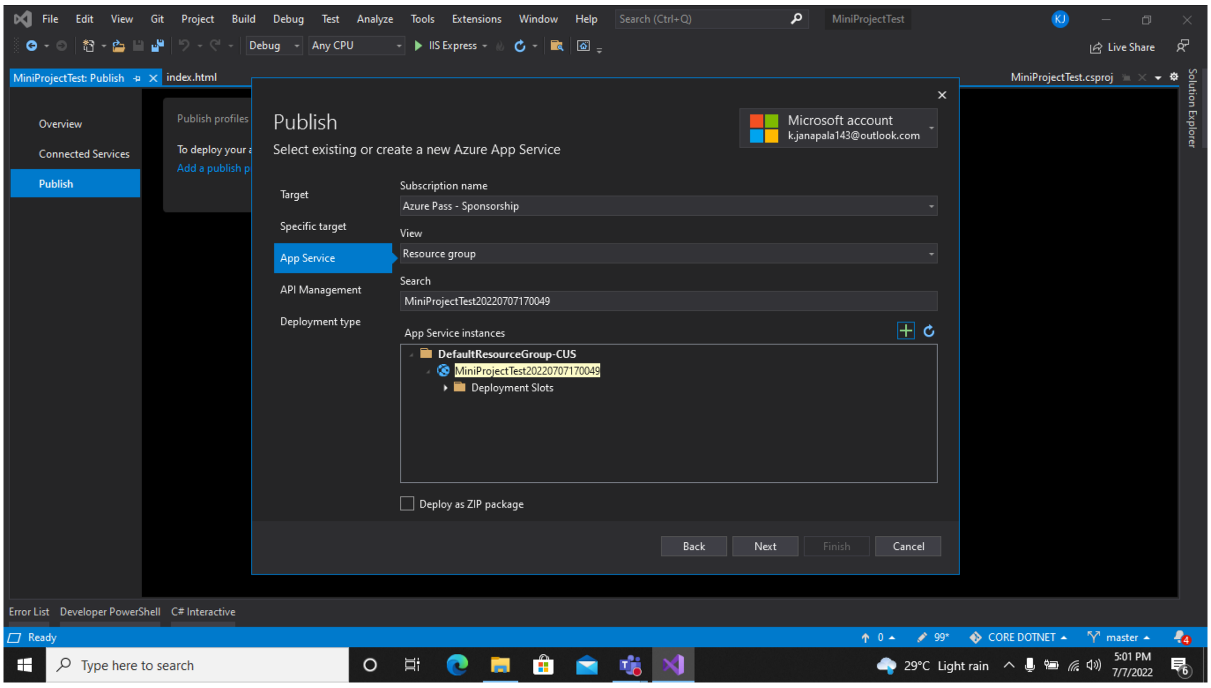
Subscription name: Azure Pass - Sponsorship

Resource group: DefaultResourceGroup-CUS (Central US)

Hosting Plan: MiniProject20220705155922Plan (East US, S1)

Creating: App Service...

15. Screen shot showing creating an app servicing after clicking create button.


Publish
Select existing or create a new Azure App Service

Microsoft account
k.janapala143@outlook.com

Subscription name: Azure Pass - Sponsorship

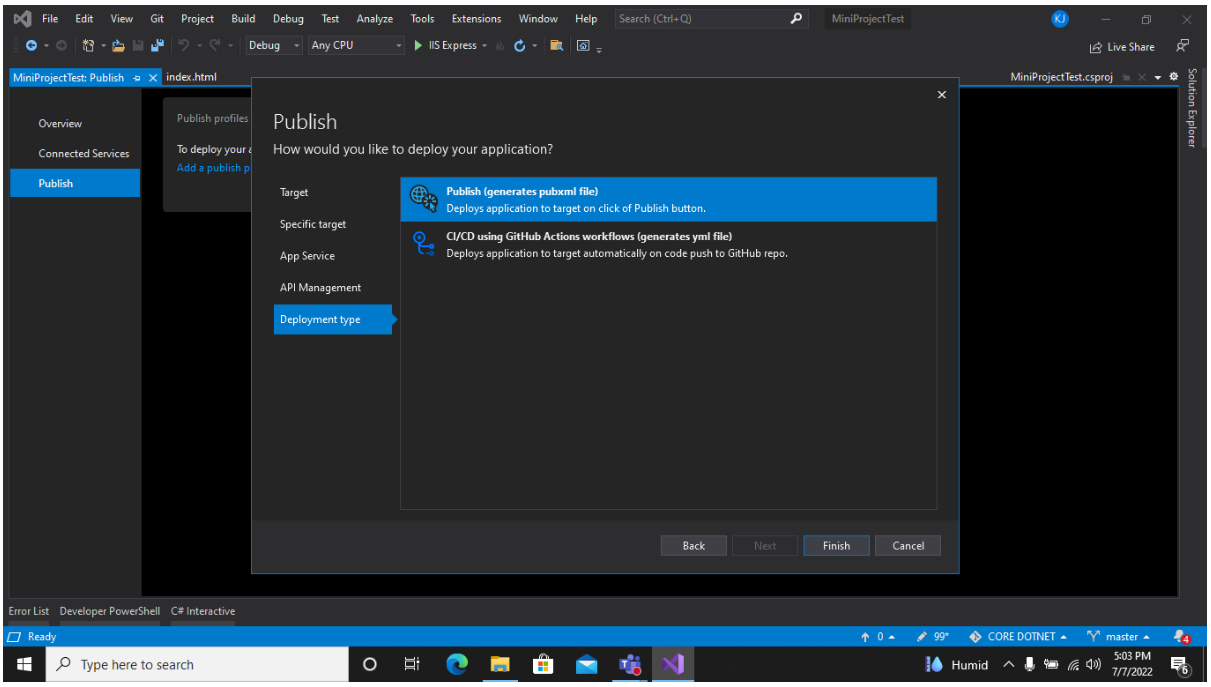
View: Resource group

Search: MiniProjectTest20220707170049

App Service instances
DefaultResourceGroup-CUS
MiniProjectTest20220707170049
Deployment Slots

Deploy as ZIP package

16. Screen shot showing created app service after previous step.

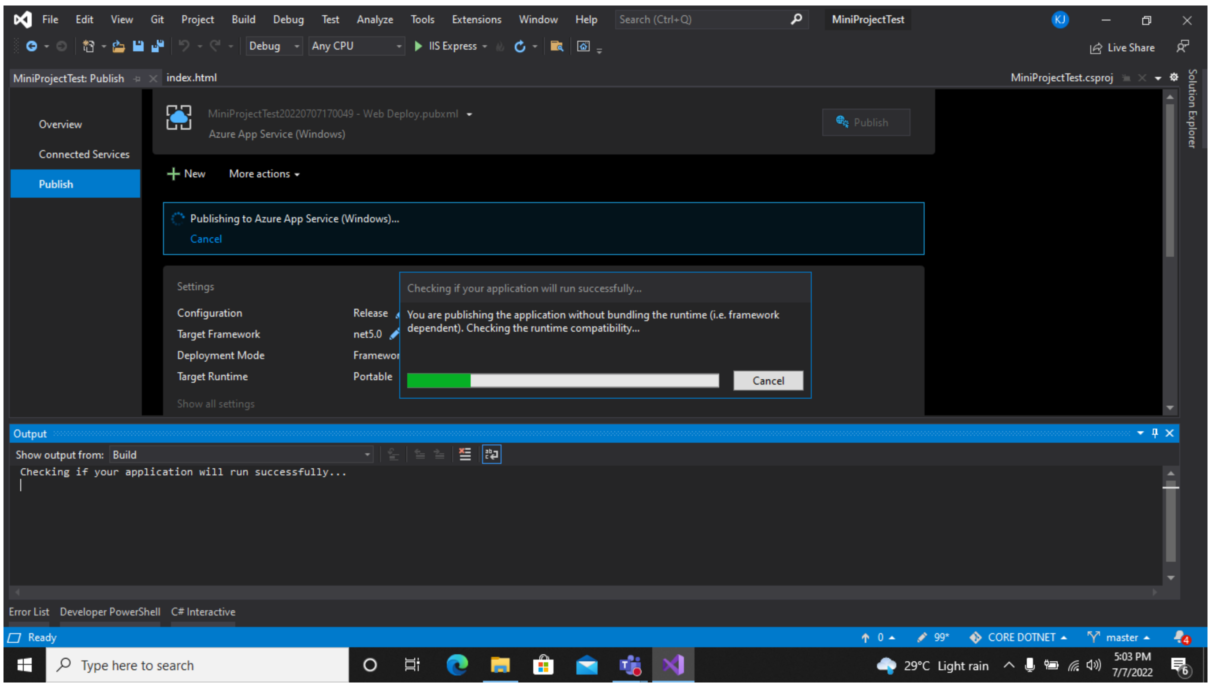

Publish

How would you like to deploy your application?

Publish (generates pubxml file)
Deploys application to target on click of Publish button.

CI/CD using GitHub Actions workflows (generates yml file)
Deploys application to target automatically on code push to GitHub repo.

17. Screen shot showing deployment type selected as Publish.


MiniProjectTest20220707170049 - Web Deploy.pubxml
Azure App Service (Windows)

Publishing to Azure App Service (Windows)...
Cancel

Settings
Configuration Release
Target Framework net5.0
Deployment Mode Framework
Target Runtime Portable

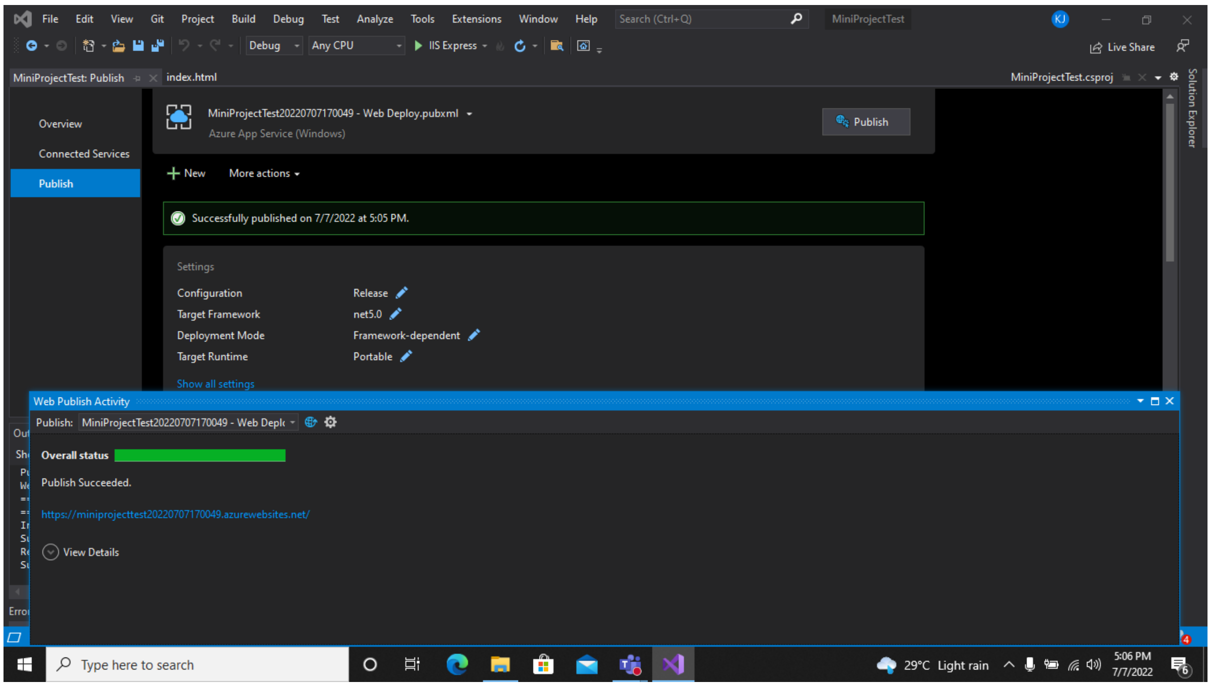
Checking if your application will run successfully...

You are publishing the application without bundling the runtime (i.e. framework dependent). Checking the runtime compatibility...

Show output from: Build

```
Checking if your application will run successfully...
```

18. Screen shot showing publish progress after clicking finish button.


MiniProjectTest20220707170049 - Web Deploy.pubxml
Azure App Service (Windows)

Successfully published on 7/7/2022 at 5:05 PM.

Settings

Configuration	Release
Target Framework	net5.0
Deployment Mode	Framework-dependent
Target Runtime	Portable

Show all settings

Web Publish Activity

Publish: MiniProjectTest20220707170049 - Web Deplc

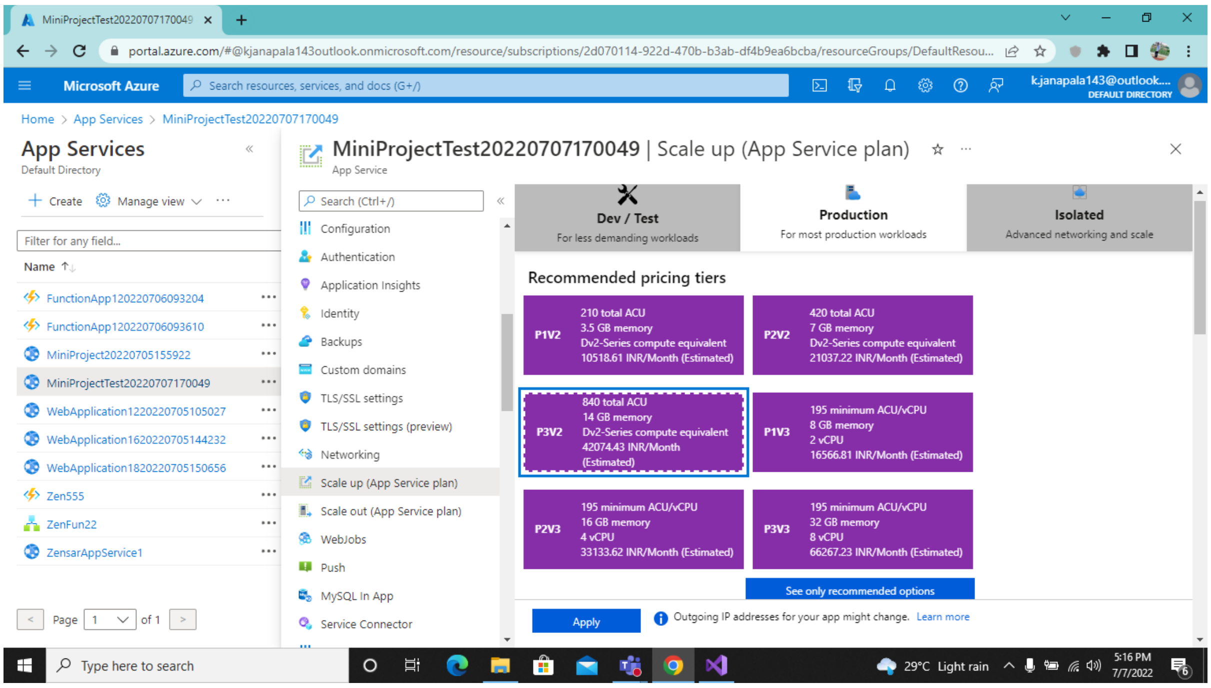
Overall status

Publish Succeeded.

https://miniprojecttest20220707170049.azurewebsites.net/

View Details

19. Screen shot showing publish success message after completion of publishing to app service.


portal.azure.com/#@kjanapala143outlook.onmicrosoft.com/resource/subscriptions/2d070114-922d-470b-b3ab-df4b9ea6bcba/resourceGroups/DefaultResou...

Home > App Services > MiniProjectTest20220707170049

App Services
Default Directory

Name

- FunctionApp120220706093204
- FunctionApp120220706093610
- MiniProject20220705155922
- MiniProjectTest20220707170049
- WebApplication1220220705105027
- WebApplication1620220705144232
- WebApplication1820220705150656
- Zen555
- ZenFun22
- ZensarAppService1

MiniProjectTest20220707170049 | Scale up (App Service plan)
App Service

Configuration, Authentication, Application Insights, Identity, Backups, Custom domains, TLS/SSL settings, TLS/SSL settings (preview), Networking, Scale up (App Service plan), Scale out (App Service plan), WebJobs, Push, MySQL In App, Service Connector

Dev / Test — For less demanding workloads
Production — For most production workloads
Isolated — Advanced networking and scale

Recommended pricing tiers

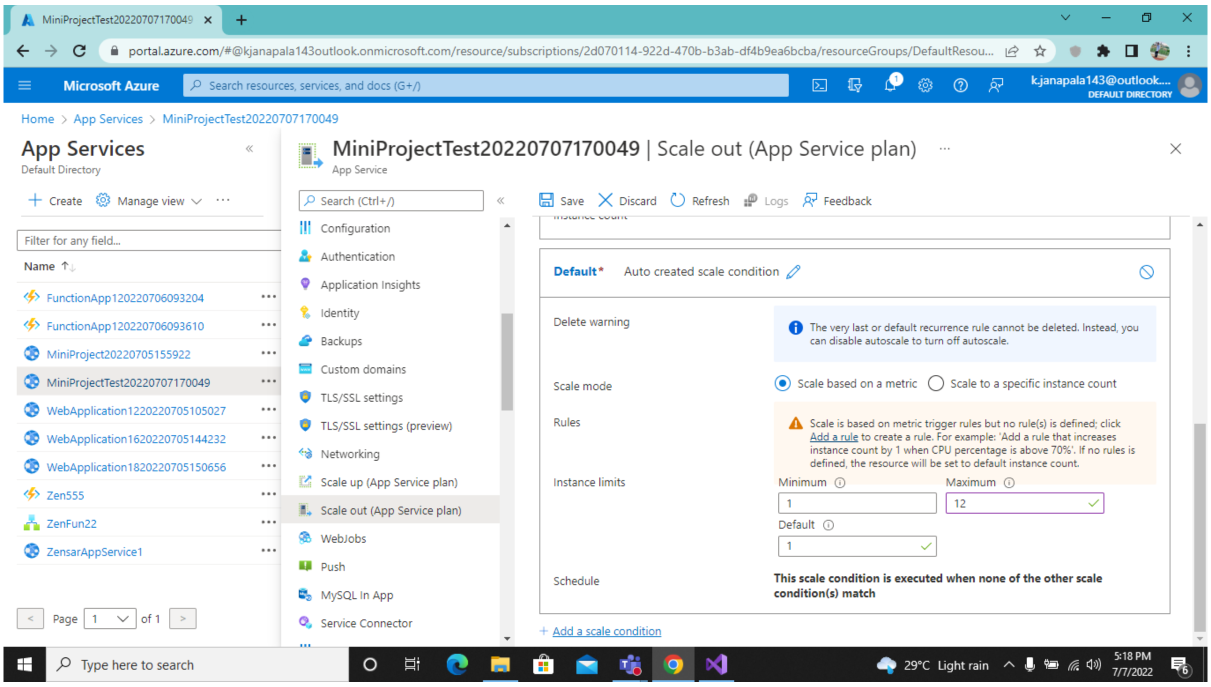
Tier	Specifications
P1V2	210 total ACU, 3.5 GB memory, Dv2-Series compute equivalent, 10518.61 INR/Month (Estimated)
P2V2	420 total ACU, 7 GB memory, Dv2-Series compute equivalent, 21037.22 INR/Month (Estimated)
P3V2	840 total ACU, 14 GB memory, Dv2-Series compute equivalent, 42074.43 INR/Month (Estimated)
P1V3	195 minimum ACU/vCPU, 8 GB memory, 2 vCPU, 16566.81 INR/Month (Estimated)
P2V3	195 minimum ACU/vCPU, 16 GB memory, 4 vCPU, 33133.62 INR/Month (Estimated)
P3V3	195 minimum ACU/vCPU, 32 GB memory, 8 vCPU, 66267.23 INR/Month (Estimated)

See only recommended options

Apply

Outgoing IP addresses for your app might change. Learn more

20. Screen shot showing scaling up specifications.


MiniProjectTest20220707170049
portal.azure.com/#@kjanapala143outlook.onmicrosoft.com/resource/subscriptions/2d070114-922d-470b-b3ab-df4b9ea6bcba/resourceGroups/DefaultResou...
Microsoft Azure
Search resources, services, and docs (G+/)
k.janapala143@outlook....
DEFAULT DIRECTORY
Home > App Services > MiniProjectTest20220707170049
App Services
Default Directory
Create
Manage view
Filter for any field...
Name
FunctionApp120220706093204
FunctionApp120220706093610
MiniProject20220705155922
MiniProjectTest20220707170049
WebApplication120220705105027
WebApplication1620220705144232
WebApplication1820220705150656
Zen555
ZenFun22
ZensarAppService1
Page 1 of 1
MiniProjectTest20220707170049 | Scale out (App Service plan)
App Service
Search (Ctrl+/)
Configuration
Authentication
Application Insights
Identity
Backups
Custom domains
TLS/SSL settings
TLS/SSL settings (preview)
Networking
Scale up (App Service plan)
Scale out (App Service plan)
WebJobs
Push
MySQL In App
Service Connector
Save
Discard
Refresh
Logs
Feedback
Add a scale condition
Type here to search
29°C Light rain
5:18 PM
7/7/2022

Default* Auto created scale condition

Delete warning: The very last or default recurrence rule cannot be deleted. Instead, you can disable autoscale to turn off autoscale.

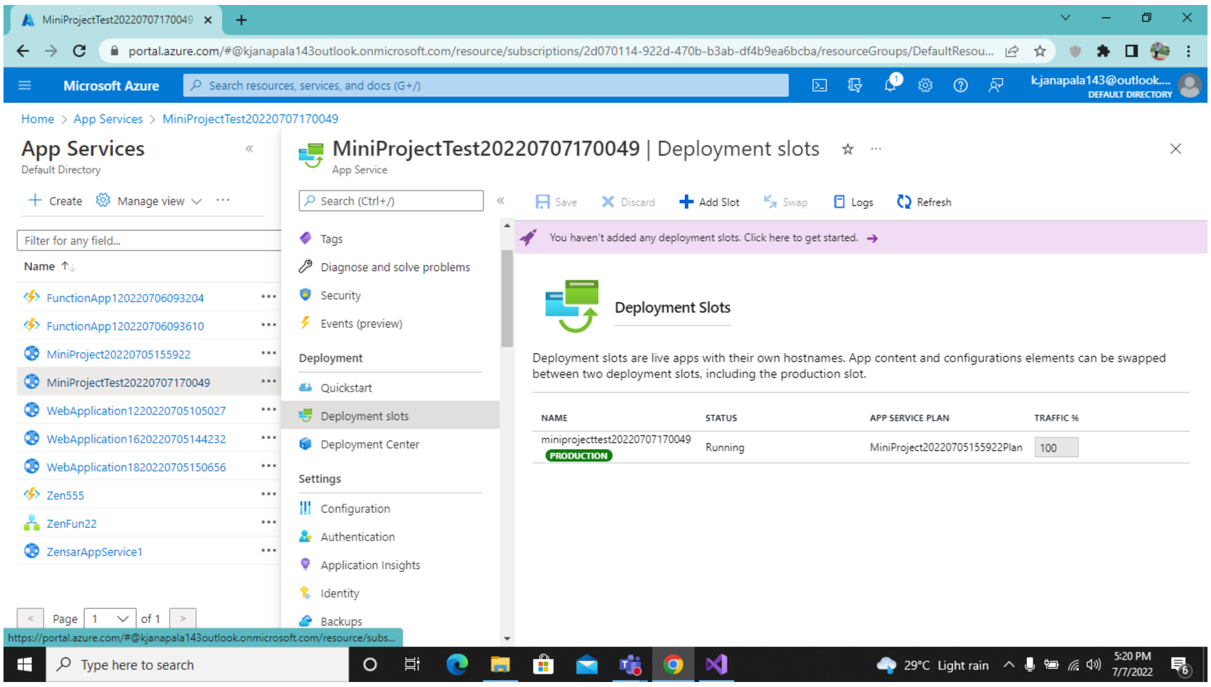
Scale mode: [✓ Scale based on a metric] Scale to a specific instance count

Rules: Scale is based on metric trigger rules but no rule(s) is defined; click Add a rule to create a rule. For example: 'Add a rule that increases instance count by 1 when CPU percentage is above 70%'. If no rules is defined, the resource will be set to default instance count.

Instance limits: Minimum 1 Maximum 12 Default 1

Schedule: **This scale condition is executed when none of the other scale condition(s) match**

21. Screen shot showing scale out conditions for the app service.


MiniProjectTest20220707170049
portal.azure.com/#@kjanapala143outlook.onmicrosoft.com/resource/subscriptions/2d070114-922d-470b-b3ab-df4b9ea6bcba/resourceGroups/DefaultResou...
Microsoft Azure
Search resources, services, and docs (G+/)
k.janapala143@outlook....
DEFAULT DIRECTORY
Home > App Services > MiniProjectTest20220707170049
App Services
Default Directory
Create
Manage view
Filter for any field...
Name
FunctionApp120220706093204
FunctionApp120220706093610
MiniProject20220705155922
MiniProjectTest20220707170049
WebApplication120220705105027
WebApplication1620220705144232
WebApplication1820220705150656
Zen555
ZenFun22
ZensarAppService1
Page 1 of 1
MiniProjectTest20220707170049 | Deployment slots
App Service
Search (Ctrl+/)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication
Application Insights
Identity
Backups
Save
Discard
Add Slot
Swap
Logs
Refresh
https://portal.azure.com/#@kjanapala143outlook.onmicrosoft.com/resource/subs...
Type here to search
29°C Light rain
5:20 PM
7/7/2022

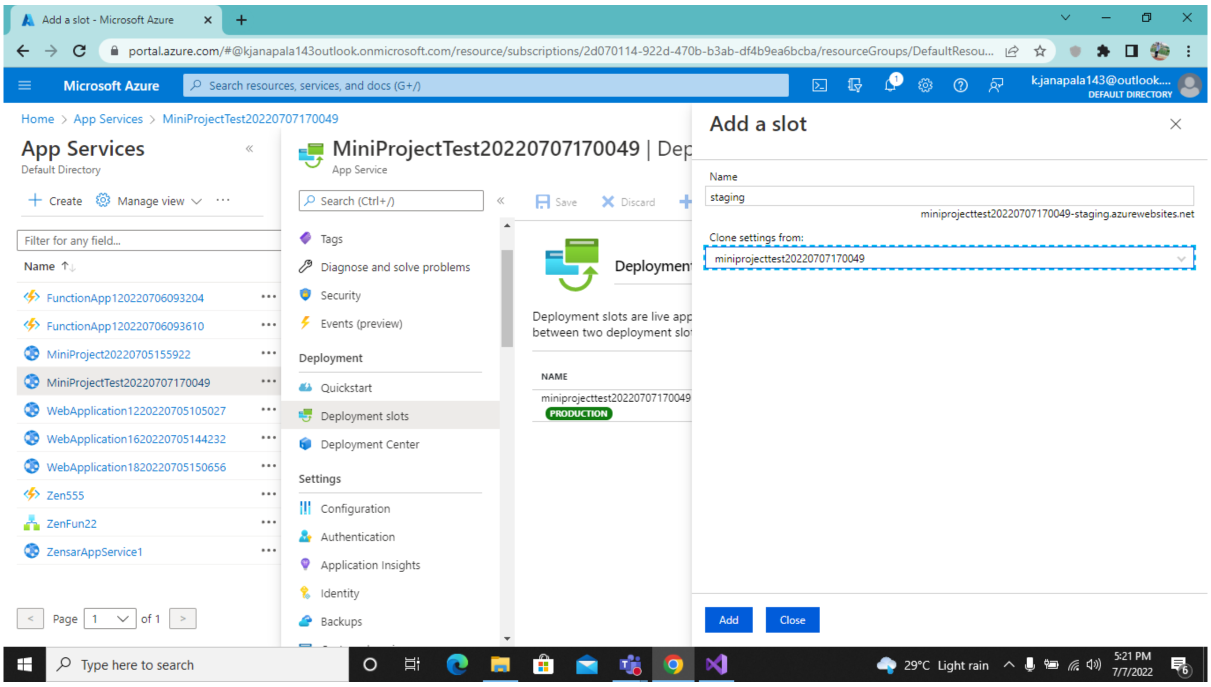
You haven't added any deployment slots. Click here to get started.

Deployment Slots

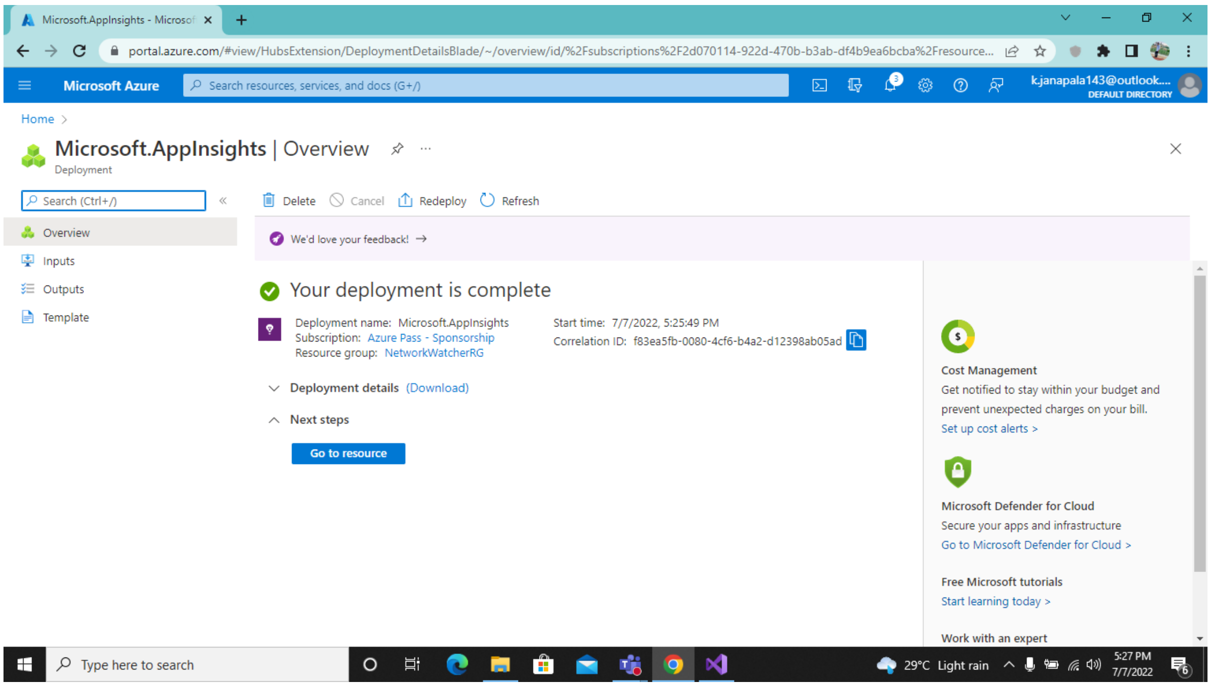
Deployment slots are live apps with their own hostnames. App content and configurations elements can be swapped between two deployment slots, including the production slot.

NAME	STATUS	APP SERVICE PLAN	TRAFFIC %
miniprojecttest20220707170049 PRODUCTION	Running	MiniProject20220705155922Plan	100

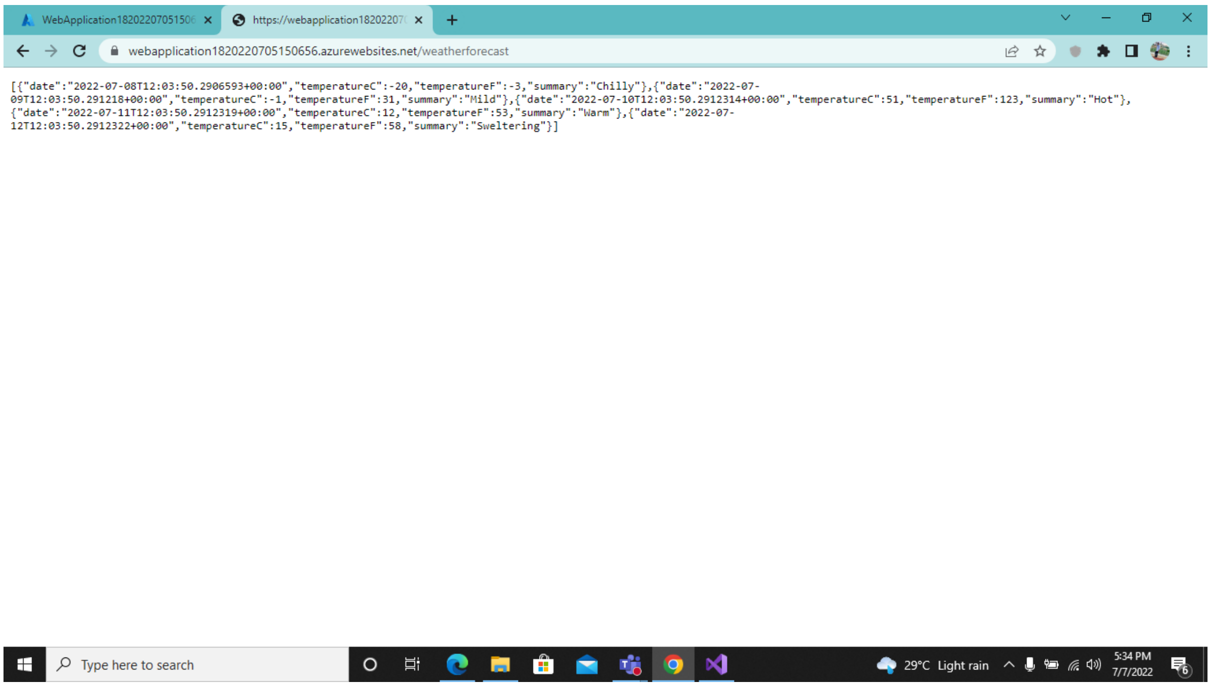
22. Screen shot showing default created deployment slot.


Add a slot - Microsoft Azure
portal.azure.com/#@kjanapala143outlook.onmicrosoft.com/resource/subscriptions/2d070114-922d-470b-b3ab-df4b9ea6bcba/resourceGroups/DefaultResou...
Microsoft Azure
Search resources, services, and docs (G+/)
kjanapala143@outlook....
DEFAULT DIRECTORY
Home > App Services > MiniProjectTest20220707170049
App Services
Default Directory
Create
Manage view
Filter for any field...
Name
FunctionApp120220706093204
FunctionApp120220706093610
MiniProject20220705155922
MiniProjectTest20220707170049
WebApplication120220705105027
WebApplication1620220705144232
WebApplication1820220705150656
Zen555
ZenFun22
ZensarAppService1
Page 1 of 1
MiniProjectTest20220707170049 | Dep
App Service
Search (Ctrl+/)
Save
Discard
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication
Application Insights
Identity
Backups
Deployment slots are live app between two deployment slot
NAME
miniprojecttest20220707170049
PRODUCTION
Add a slot
Name
staging
miniprojecttest20220707170049-staging.azurewebsites.net
Clone settings from:
miniprojecttest20220707170049
Add
Close
Type here to search
29°C Light rain
5:21 PM
7/7/2022

23. Screen shot showing adding a new slot for staging.


Microsoft.AppInsights - Microsof
portal.azure.com/#view/HubsExtension/DeploymentDetailsBlade/~/overview/id/%2Fsubscriptions%2F2d070114-922d-470b-b3ab-df4b9ea6bcba%2Fresource...
Microsoft Azure
Search resources, services, and docs (G+/)
kjanapala143@outlook....
DEFAULT DIRECTORY
Home >
Microsoft.AppInsights | Overview
Deployment
Search (Ctrl+/)
Overview
Inputs
Outputs
Template
Delete
Cancel
Redeploy
Refresh
We'd love your feedback! →
Your deployment is complete
Deployment name: Microsoft.AppInsights
Subscription: Azure Pass - Sponsorship
Resource group: NetworkWatcherRG
Start time: 7/7/2022, 5:25:49 PM
Correlation ID: f83ea5fb-0080-4cf6-b4a2-d12398ab05ad
Deployment details (Download)
Next steps
Go to resource
Cost Management
Get notified to stay within your budget and prevent unexpected charges on your bill.
Set up cost alerts >
Microsoft Defender for Cloud
Secure your apps and infrastructure
Go to Microsoft Defender for Cloud >
Free Microsoft tutorials
Start learning today >
Work with an expert
Type here to search
29°C Light rain
5:27 PM
7/7/2022

24. Screen shot showing created app insights for the deployed project.



WebApplication1820220705150
https://webapplication18202207
webapplication1820220705150656.azurewebsites.net/weatherforecast
Type here to search
29°C Light rain
5:34 PM
7/7/2022

```
[{"date":"2022-07-08T12:03:50.2906593+00:00","temperatureC":-20,"temperatureF":-3,"summary":"Chilly"},{"date":"2022-07-
09T12:03:50.291218+00:00","temperatureC":-1,"temperatureF":31,"summary":"Mild"},{"date":"2022-07-10T12:03:50.2912314+00:00","temperatureC":51,"temperatureF":123,"summary":"Hot"},
{"date":"2022-07-11T12:03:50.2912319+00:00","temperatureC":12,"temperatureF":53,"summary":"Warm"},{"date":"2022-07-
12T12:03:50.2912322+00:00","temperatureC":15,"temperatureF":58,"summary":"Sweltering"}]
```

25. Screen shot showing weatherforecast rest end point on the deployed app to test the deployed application.