WEB API PROJECT

1. Create WEB API Project.

2. Add models folder and in that folder add Product.cs Class.

3. Add Controller for Product class Using Entity Frame Work.

4. Open package manager Consoler and follow the below steps.

4.1. Add-Migration Initialcreate.

4.2. Update-Database.

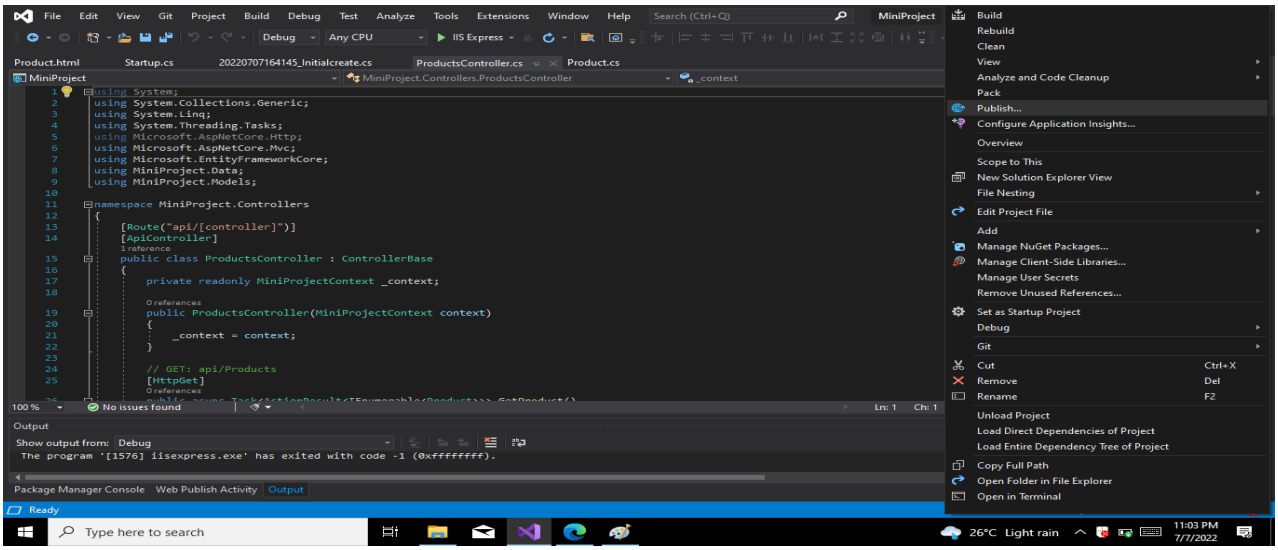
5. Add Web Api Client html page in the Project Using Ajax and JQuery.

6. Finally Hosting to the Azure. Follow the below Pics.

Azure Hosting :-

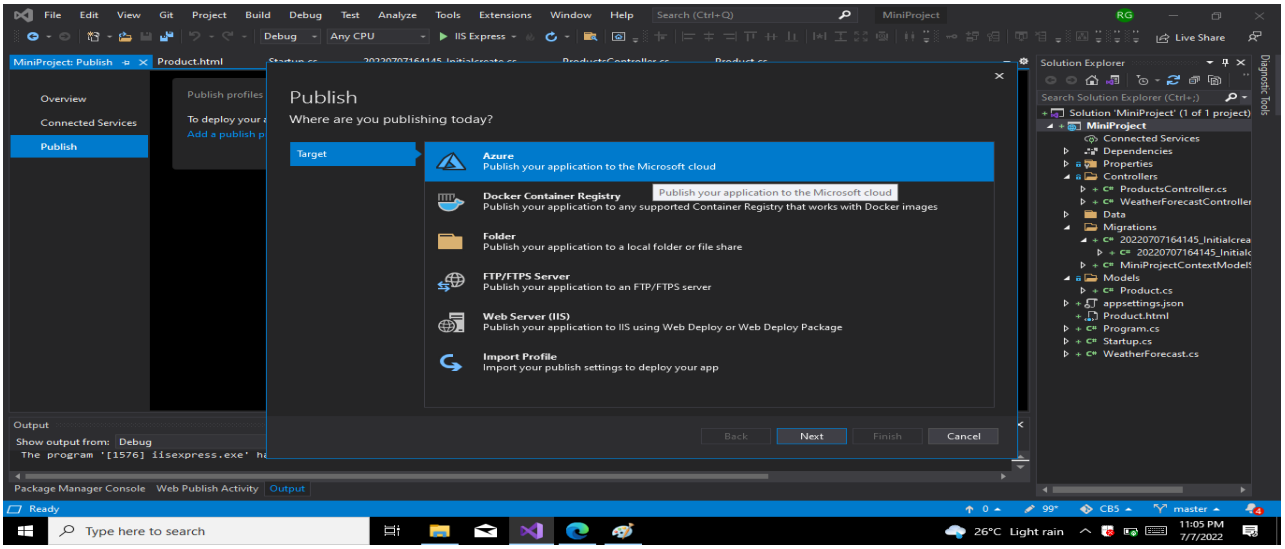
1. Host the web api in azure and consume the same using JQuery Client :-

In Solution Explorer, right-click the project and select Publish.

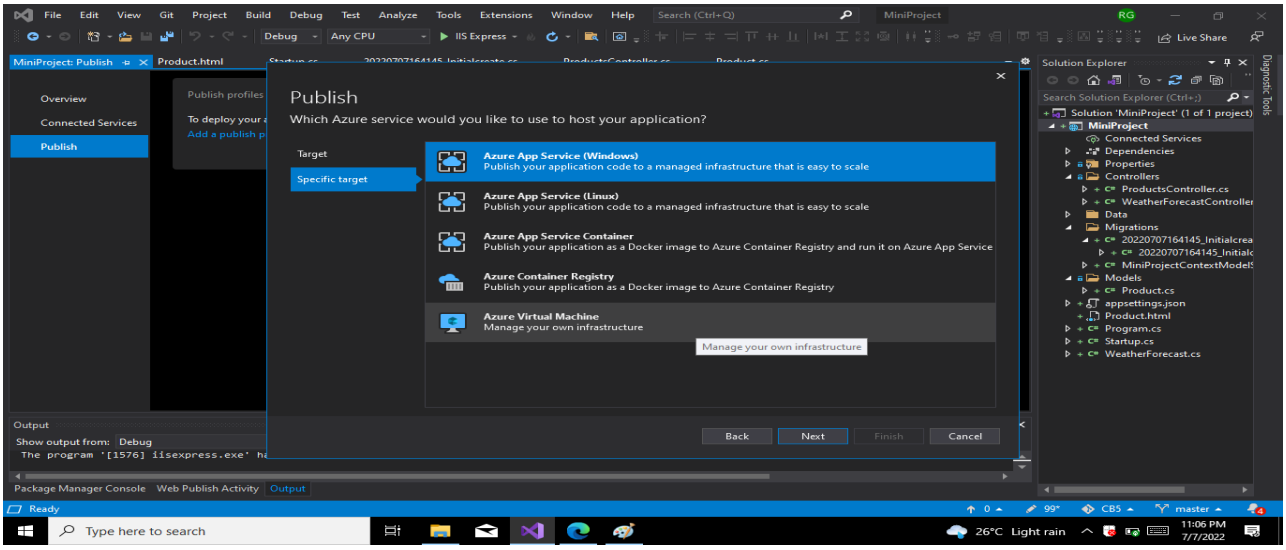


In the Publish dialog, select Azure and select the Next button.

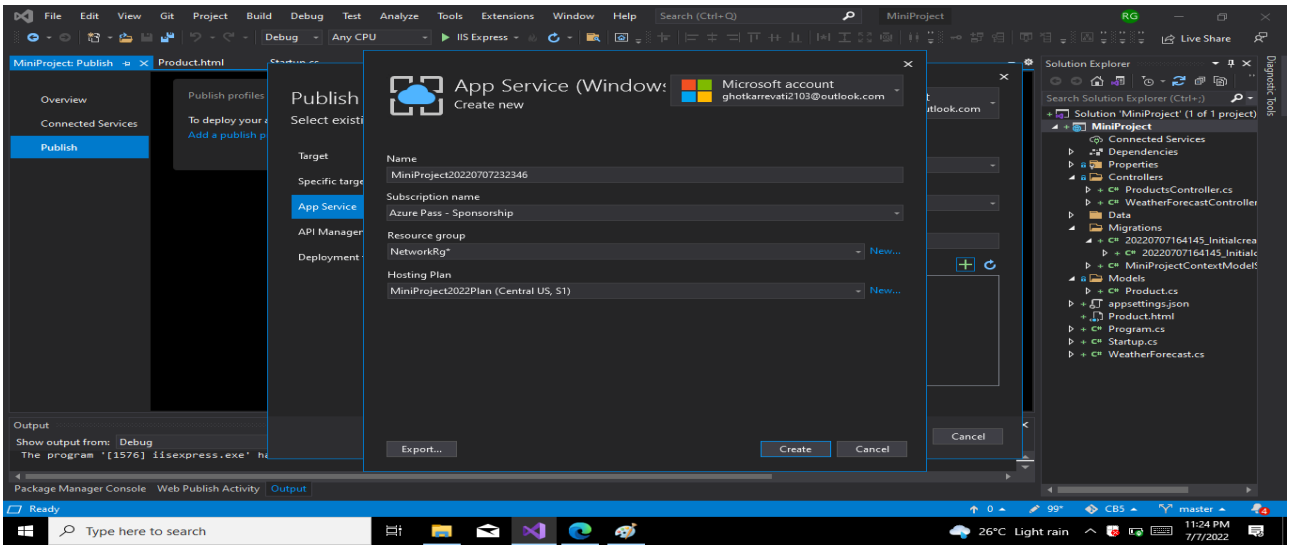
1



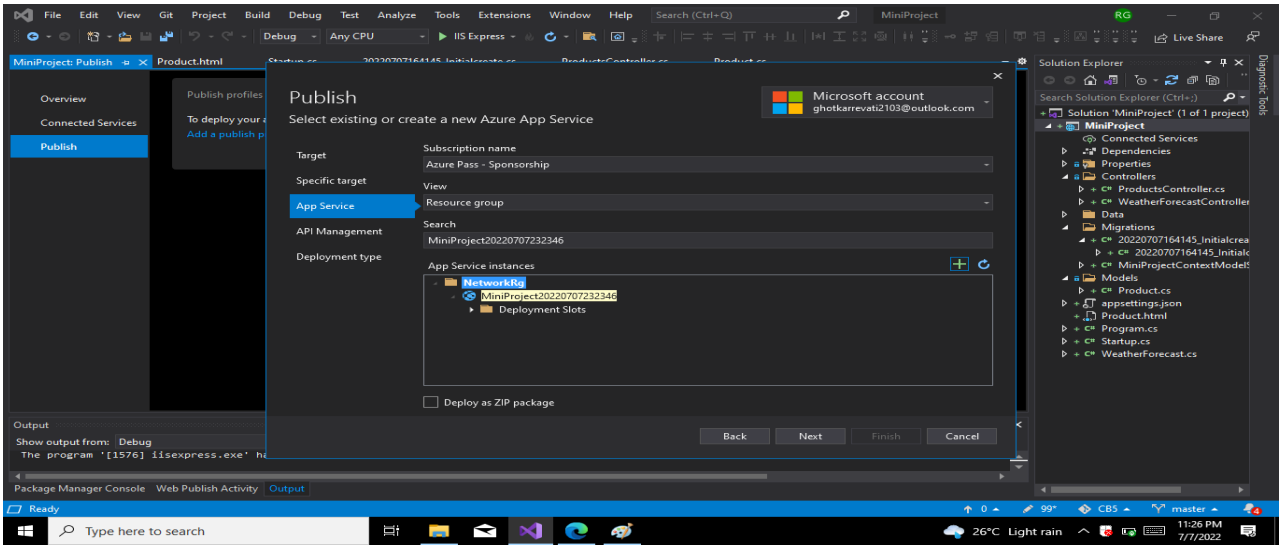
Select Azure App Service (Windows) and select the Next button .



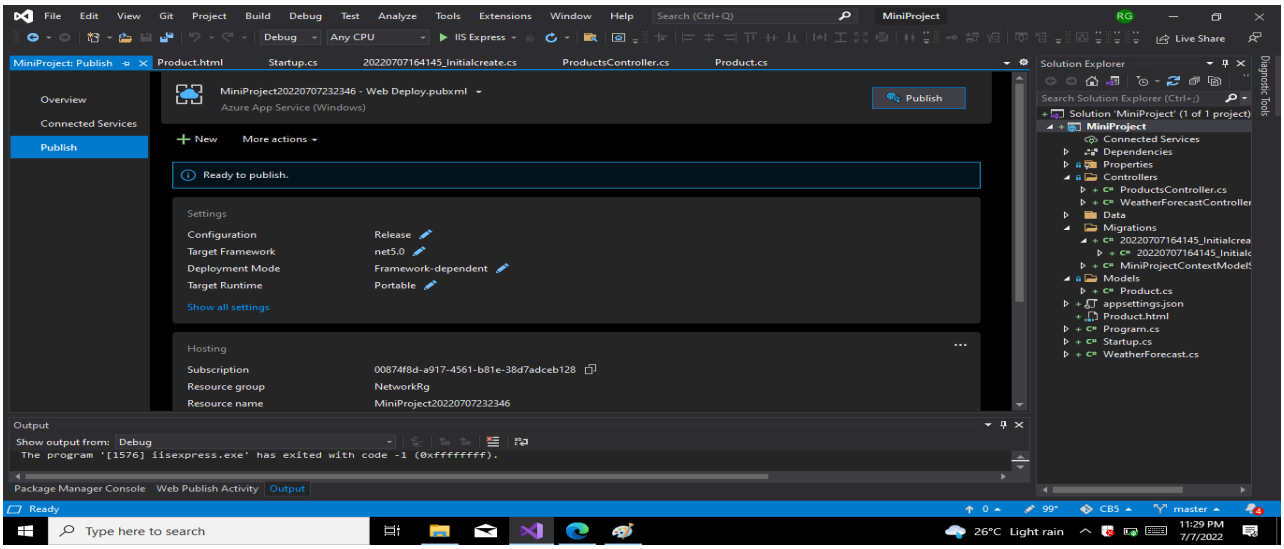
Select Create a new Azure App Service.

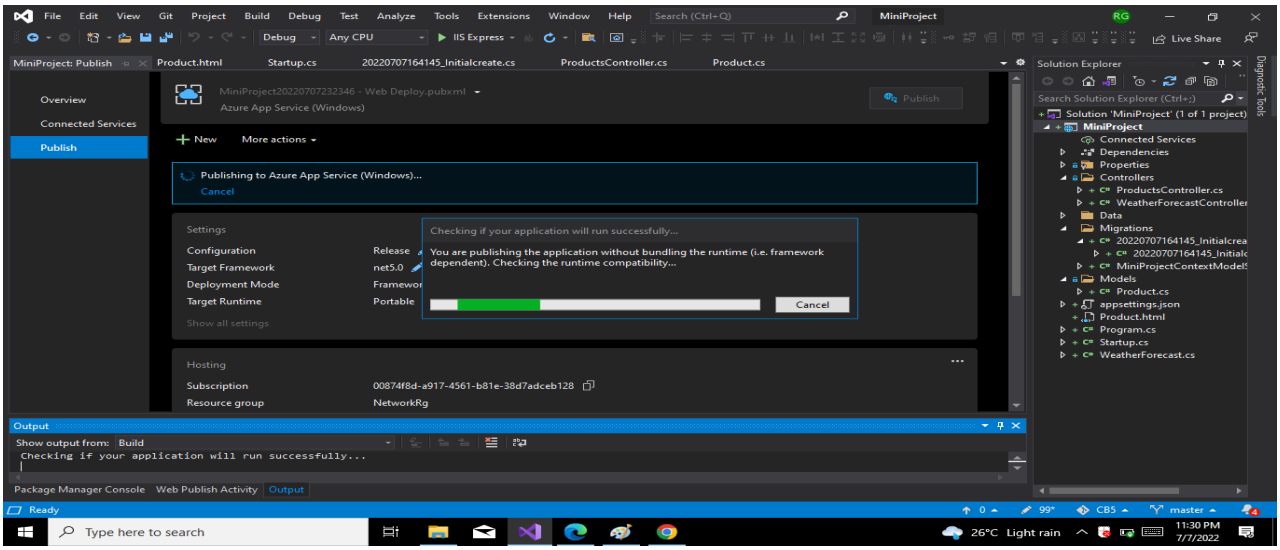


After creation is completed, the dialog is automatically closed and the Publish dialog gets focus again. The instance that was created is automatically selected.

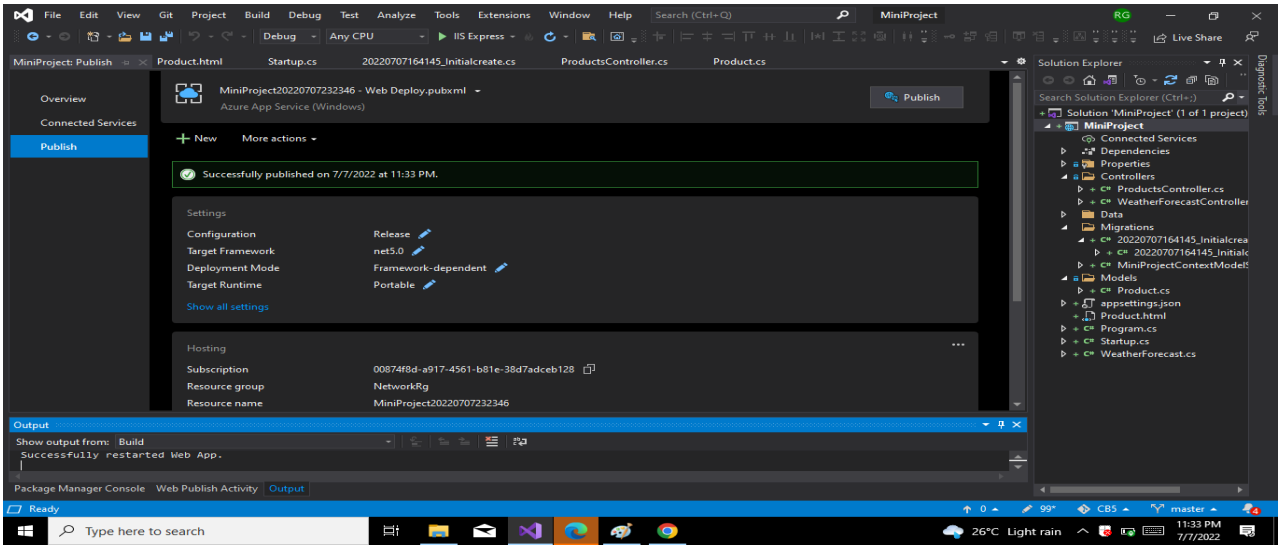


1





Select the Publish button after that it will Publishing to Azure App Service(Window) and checking your application will run Successfully..



2.Configure Scale out by adding rules for custom scaling :-

A scale out operation is the equivalent of creating multiple copies of your web site and adding a load balancer to distribute the demand between them. When you scale out a web site in Windows Azure Web Sites there is no need to configure load balancing separately since this is already provided by the platform.

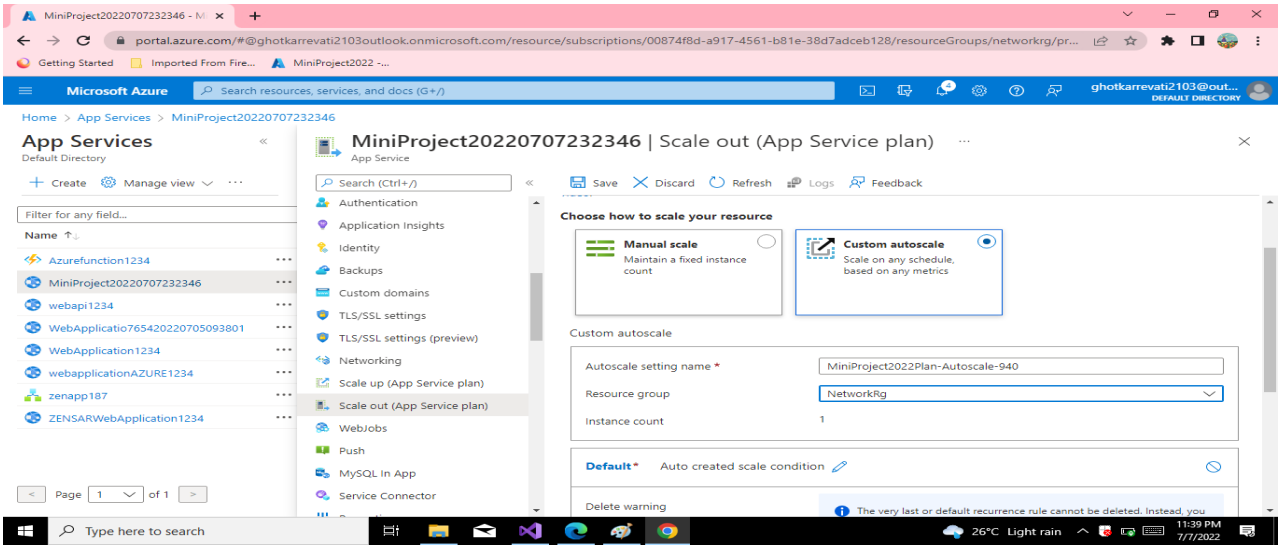
Follow the below images to add the scale out to our web site.

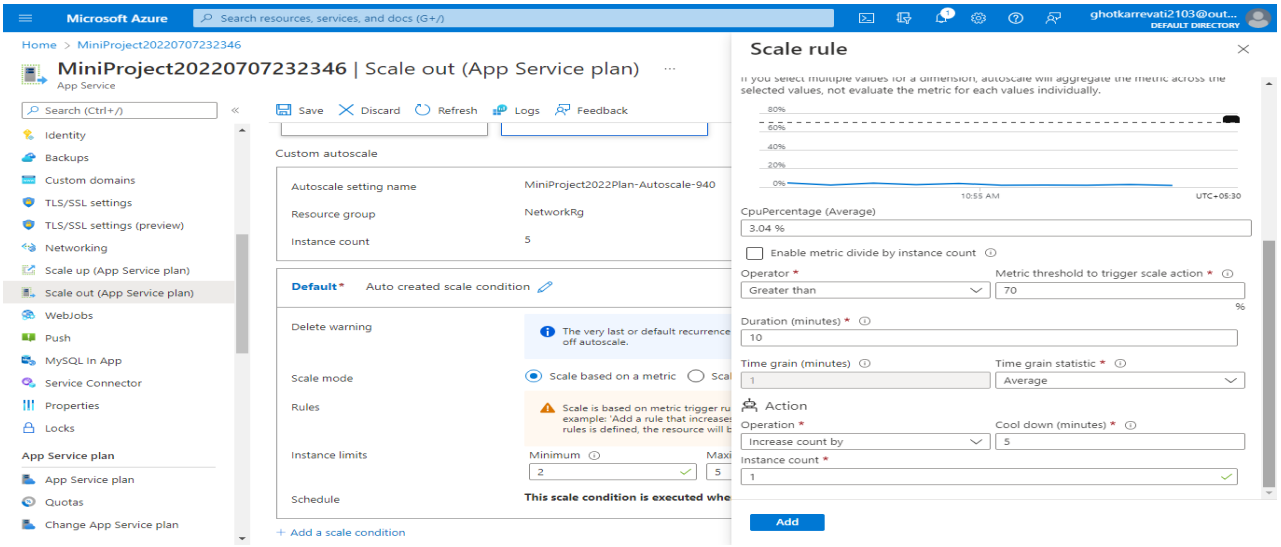
1.select Custom Auto Scale.

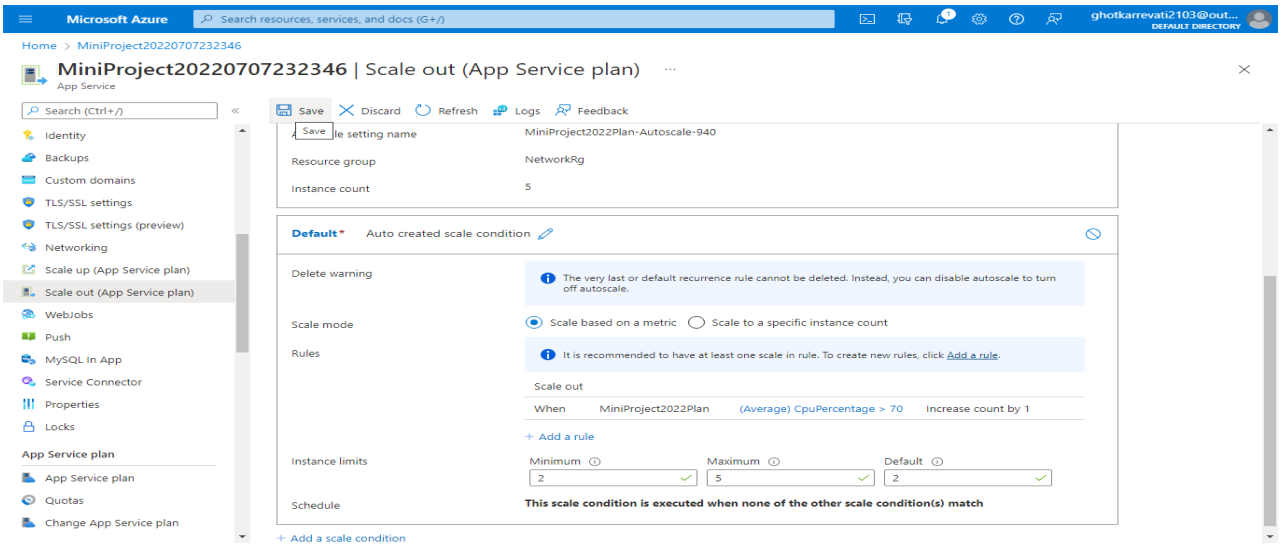
2.Click on Add a rule.

3.Add your rules and click on Add button and Save changes.

1


MiniProject20220707232346 - M
portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/pr...
Getting Started
Imported From Fire...
MiniProject2022 -...
Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > App Services > MiniProject20220707232346
App Services
Default Directory
Create
Manage view
Filter for any field...
Name
Azurefunction1234
MiniProject20220707232346
webapi1234
WebApplicatio765420220705093801
WebApplication1234
webapplicationAZURE1234
zenapp187
ZENSARWebApplication1234
Page 1 of 1
MiniProject20220707232346 | Scale out (App Service plan)
App Service
Search (Ctrl+/)
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
Choose how to scale your resource
Manual scale
Maintain a fixed instance count
Custom autoscale
Scale on any schedule, based on any metrics
Custom autoscale
Autoscale setting name *
MiniProject2022Plan-Autoscale-940
Resource group
NetworkRg
Instance count
1
Default *
Auto created scale condition
Delete warning
The very last or default recurrence rule cannot be deleted. Instead, you
Type here to search
26°C Light rain
11:39 PM
7/7/2022


Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > MiniProject20220707232346
MiniProject20220707232346 | Scale out (App Service plan)
App Service
Search (Ctrl+/)
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
Properties
Locks
App Service plan
App Service plan
Quotas
Change App Service plan
Save
Discard
Refresh
Logs
Feedback
Custom autoscale
Autoscale setting name
MiniProject2022Plan-Autoscale-940
Resource group
NetworkRg
Instance count
5
Default *
Auto created scale condition
Delete warning
The very last or default recurrence
off autoscale.
Scale mode
Scale based on a metric
Rules
Instance limits
Minimum
Schedule
This scale condition is executed whe
Add a scale condition
Scale rule
80%
60%
40%
20%
0%
10:55 AM
UTC+05:30
CpuPercentage (Average)
3.04 %
Enable metric divide by instance count
Operator *
Greater than
Metric threshold to trigger scale action *
70
%
Duration (minutes) *
10
Time grain (minutes)
1
Time grain statistic *
Average
Action
Operation *
Increase count by
Cool down (minutes) *
5
Instance count *
1
Add



3.Configure Deployment Slots for Staging and Production :-

Azure Functions deployment slots allow your function app to run different instances called "slots". Slots are different environments exposed via a publicly available endpoint. One app instance is always mapped to the production slot, and you can swap instances assigned to a slot on demand. Function apps running under the Apps Service plan may have multiple slots, while under the Consumption plan only one slot is allowed.

The following reflect how functions are affected by swapping slots:

· Traffic redirection is seamless; no requests are dropped because of a swap. This seamless behavior is a result of the next function triggers being routed to the swapped slot.

· Currently executing function are terminated during the swap. Please review Improve the performance and reliability of Azure Functions to learn how to write stateless and defensive functions.

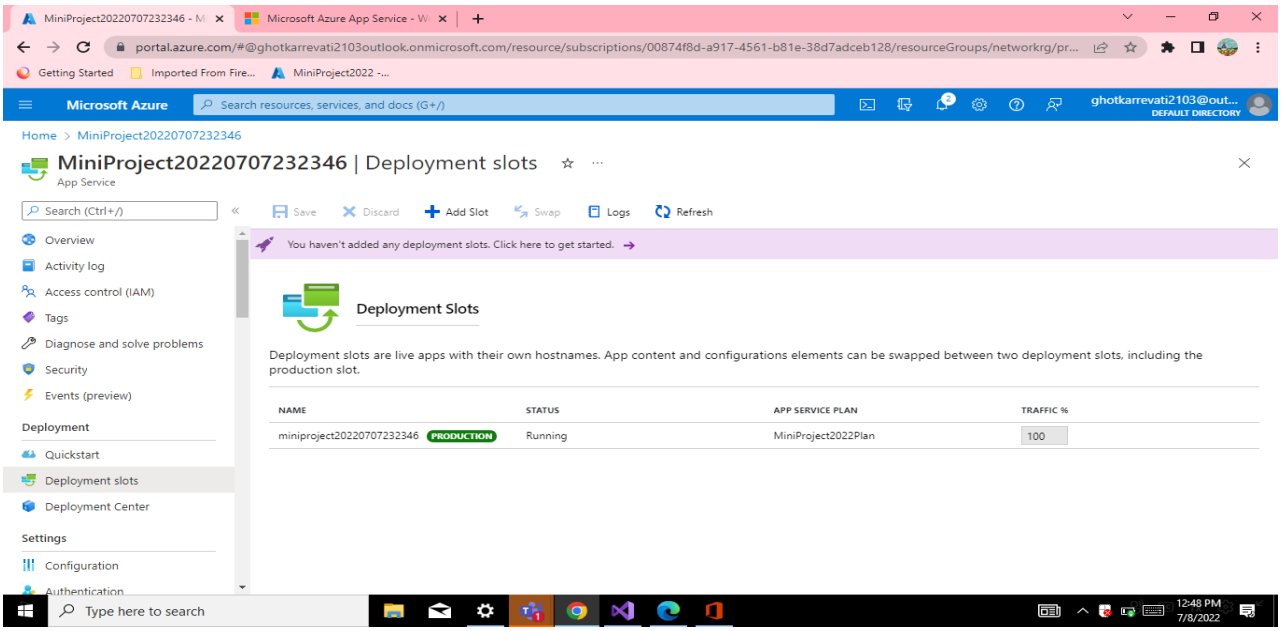
Follow the bellow images to add deployment slots.

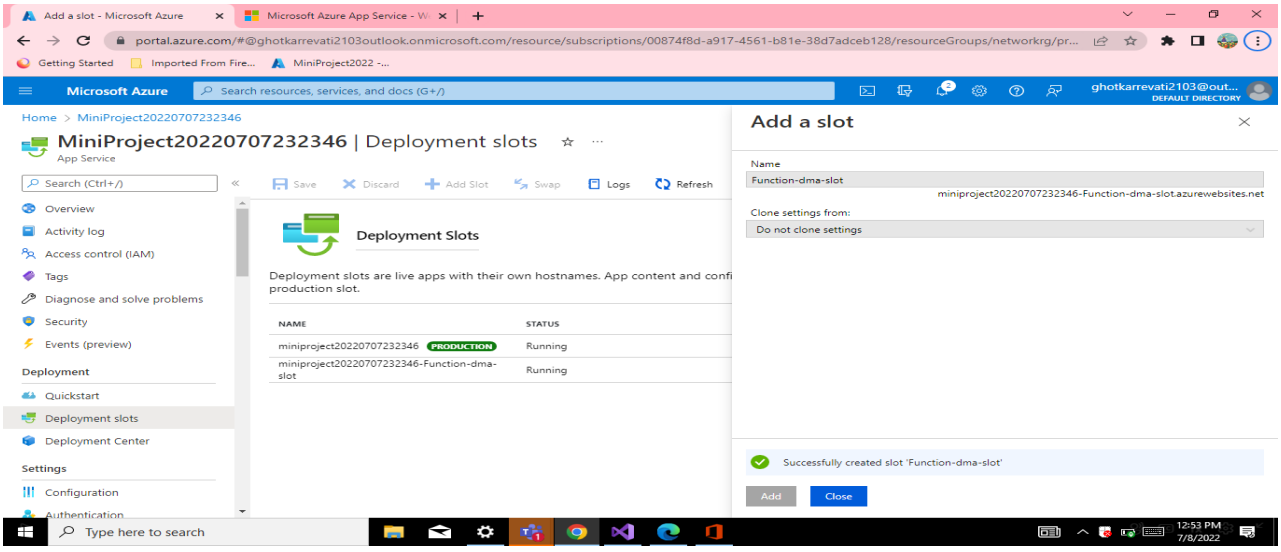
1. Click on Add Slot.

2. Enter The slot name and click on add button.

3. Finally swapping the slots.

1


MiniProject20220707232346 - M
Microsoft Azure App Service - W
portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/pr...
Getting Started
Imported From Fire...
MiniProject2022 -...
Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > MiniProject20220707232346
MiniProject20220707232346 | Deployment slots
App Service
Search (Ctrl+/)
Save
Discard
Add Slot
Swap
Logs
Refresh
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication
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 %
miniproject20220707232346
PRODUCTION
Running
MiniProject2022Plan
100
Type here to search
12:48 PM
7/8/2022


Add a slot - Microsoft Azure
Microsoft Azure App Service - W
portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/pr...
Getting Started
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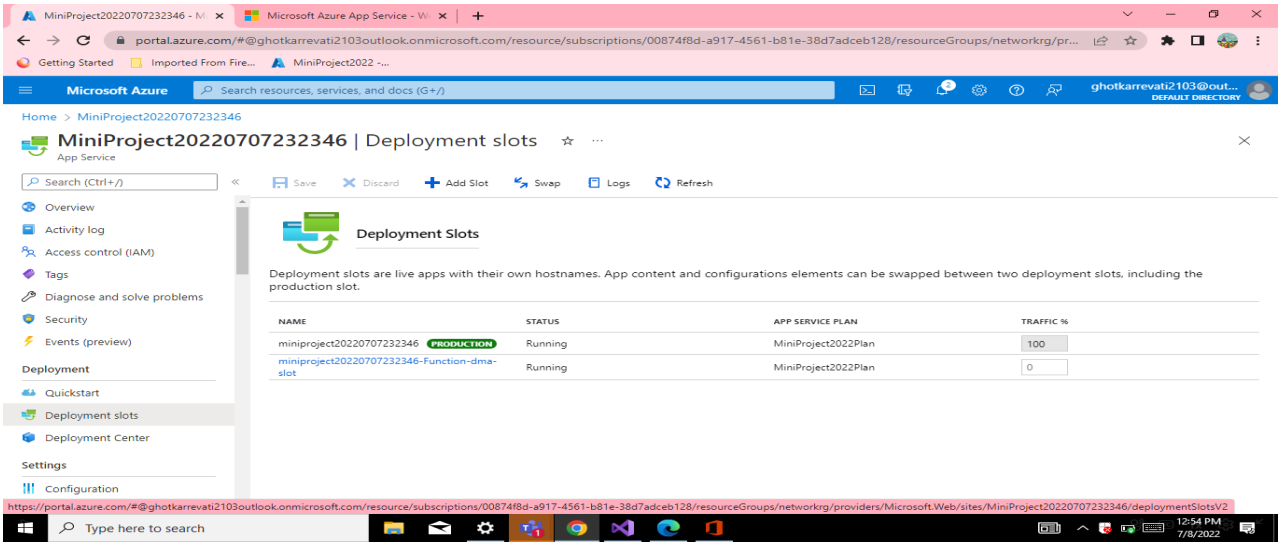
MiniProject2022 -...
Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > MiniProject20220707232346
MiniProject20220707232346 | Deployment slots
App Service
Search (Ctrl+/)
Save
Discard
Add Slot
Swap
Logs
Refresh
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication
Deployment Slots
Deployment slots are live apps with their own hostnames. App content and confi
production slot.
NAME
STATUS
miniproject20220707232346
PRODUCTION
Running
miniproject20220707232346-Function-dma-slot
Running
Add a slot
Name
Function-dma-slot
miniproject20220707232346-Function-dma-slot.azurewebsites.net
Clone settings from:
Do not clone settings
Successfully created slot 'Function-dma-slot'
Add
Close
Type here to search
12:53 PM
7/8/2022

1


MiniProject20220707232346 - M
Microsoft Azure App Service - W
portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/pr...
Getting Started
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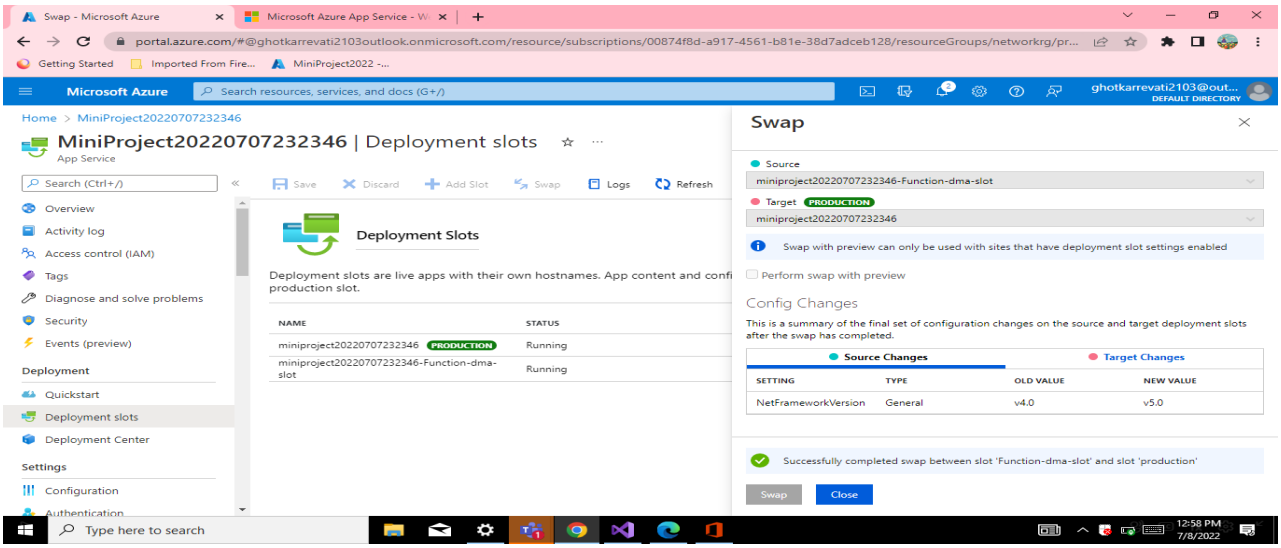
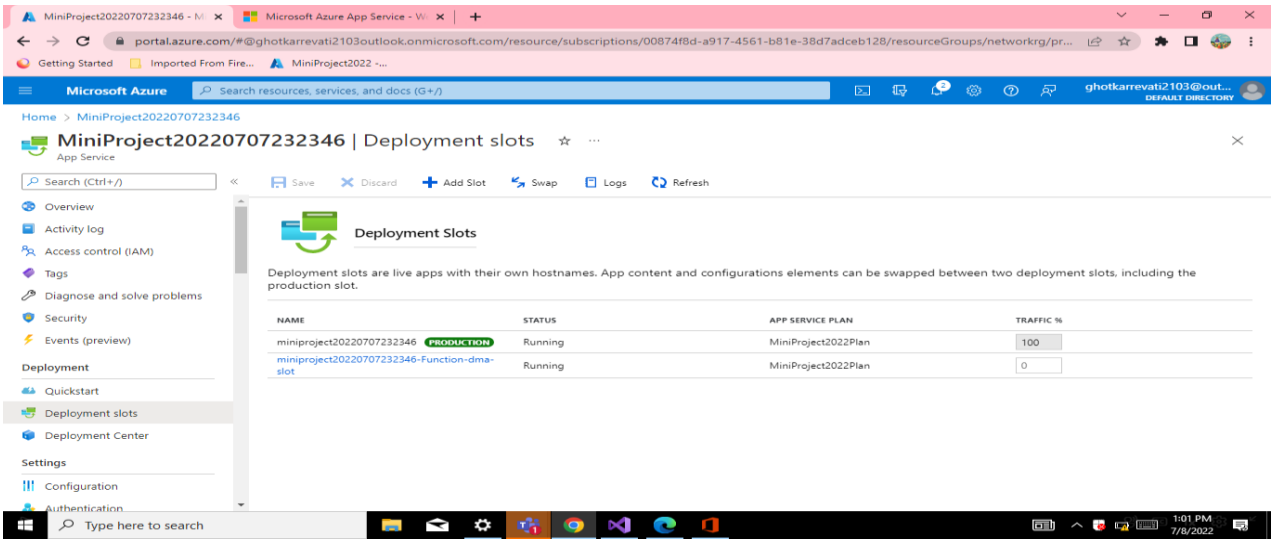
MiniProject2022 -...
Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > MiniProject20220707232346
MiniProject20220707232346 | Deployment slots
App Service
Search (Ctrl+/)
Save
Discard
Add Slot
Swap
Logs
Refresh
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
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 %
miniproject20220707232346
PRODUCTION
Running
MiniProject2022Plan
100
miniproject20220707232346-Function-dma-slot
Running
MiniProject2022Plan
0
https://portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/providers/Microsoft.Web/sites/MiniProject20220707232346/deploymentSlotsV2
Type here to search
12:54 PM
7/8/2022


Swap - Microsoft Azure
Microsoft Azure App Service - W
portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/pr...
Getting Started
Imported From Fire...
MiniProject2022 -...
Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > MiniProject20220707232346
MiniProject20220707232346 | Deployment slots
App Service
Search (Ctrl+/)
Save
Discard
Add Slot
Swap
Logs
Refresh
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication
Deployment Slots
Deployment slots are live apps with their own hostnames. App content and confi
production slot.
NAME
STATUS
miniproject20220707232346
PRODUCTION
Running
miniproject20220707232346-Function-dma-slot
Running
Swap
Source
miniproject20220707232346-Function-dma-slot
Target
PRODUCTION
miniproject20220707232346
Swap with preview can only be used with sites that have deployment slot settings enabled
Perform swap with preview
Config Changes
This is a summary of the final set of configuration changes on the source and target deployment slots after the swap has completed.
Source Changes
Target Changes
SETTING
TYPE
OLD VALUE
NEW VALUE
NetFrameworkVersion
General
v4.0
v5.0
Successfully completed swap between slot 'Function-dma-slot' and slot 'production'
Swap
Close
Type here to search
12:58 PM
7/8/2022


MiniProject20220707232346 - M
Microsoft Azure App Service - W
portal.azure.com/#@ghotkarrevati2103outlook.onmicrosoft.com/resource/subscriptions/00874f8d-a917-4561-b81e-38d7adceb128/resourceGroups/networkrg/pr...
Getting Started
Imported From Fire...
MiniProject2022 -...
Microsoft Azure
Search resources, services, and docs (G+/)
ghotkarrevati2103@out...
DEFAULT DIRECTORY
Home > MiniProject20220707232346
MiniProject20220707232346 | Deployment slots
App Service
Search (Ctrl+/)
Save
Discard
Add Slot
Swap
Logs
Refresh
Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Security
Events (preview)
Deployment
Quickstart
Deployment slots
Deployment Center
Settings
Configuration
Authentication
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 %
miniproject20220707232346
PRODUCTION
Running
MiniProject2022Plan
100
miniproject20220707232346-Function-dma-slot
Running
MiniProject2022Plan
0
Type here to search
1:01 PM
7/8/2022

4.Configure Application Insights for the project :-

Application Insights is an extensible analytics service that monitors your live web application. With it you can detect and diagnose performance issues, and understand what users actually do with your app. It's designed for developers, to help you continuously improve performance and usability. It works for apps on a wide variety of platforms including .NET, Node.js and J2EE, hosted on-premises or in the cloud.

It provides benefits as:

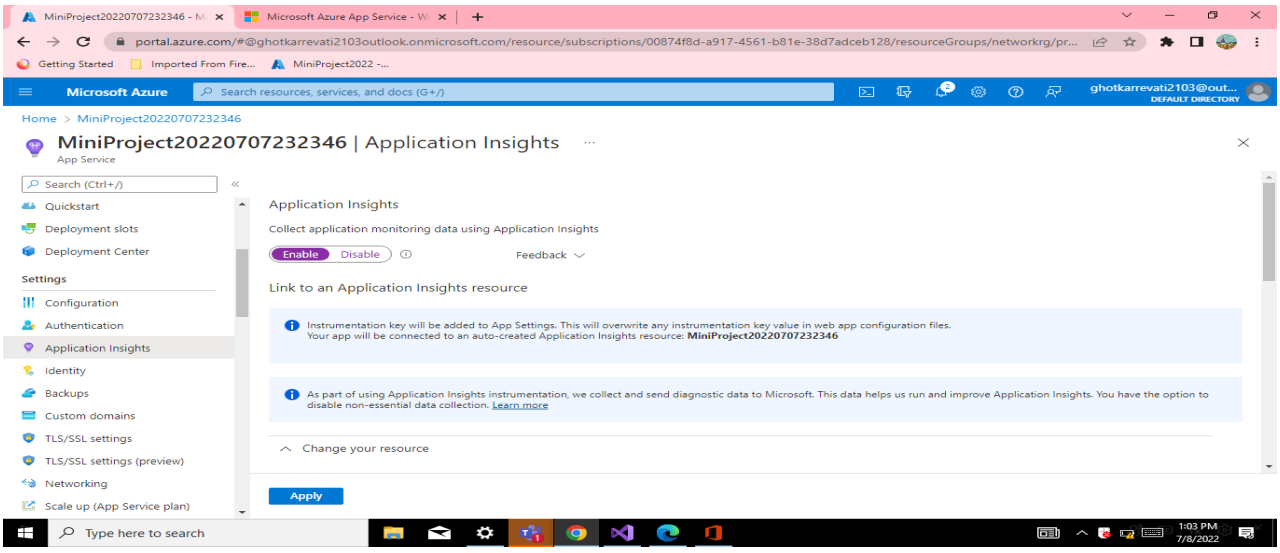
- Exceptions and performance diagnostics.
- Interactive data analysis.
- Azure diagnostics.
- Proactive detection.

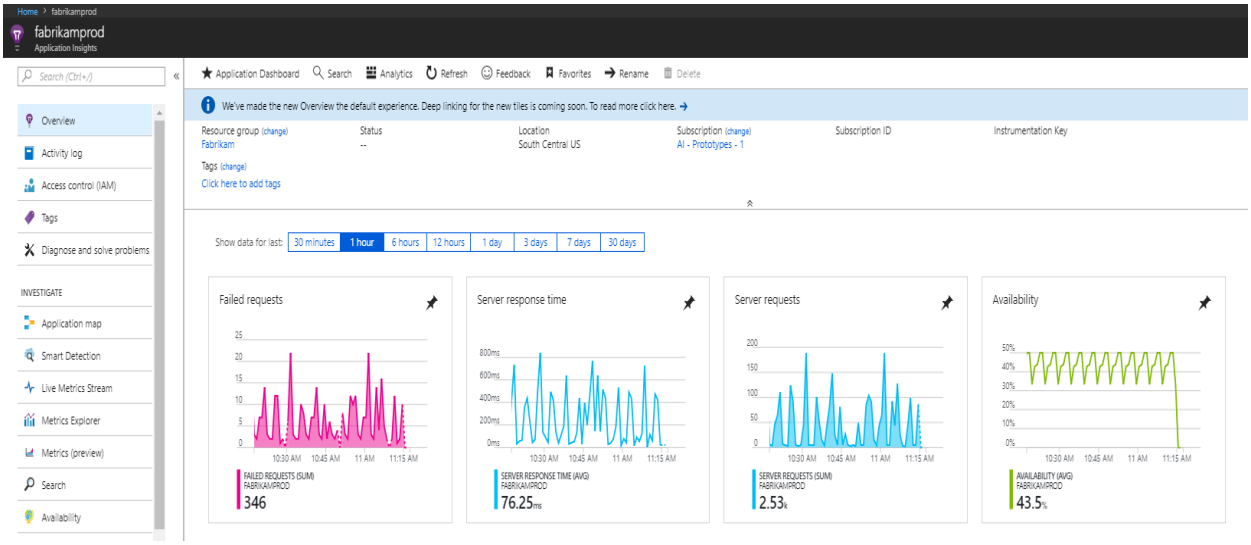
Follow the bellow images to add Application insights

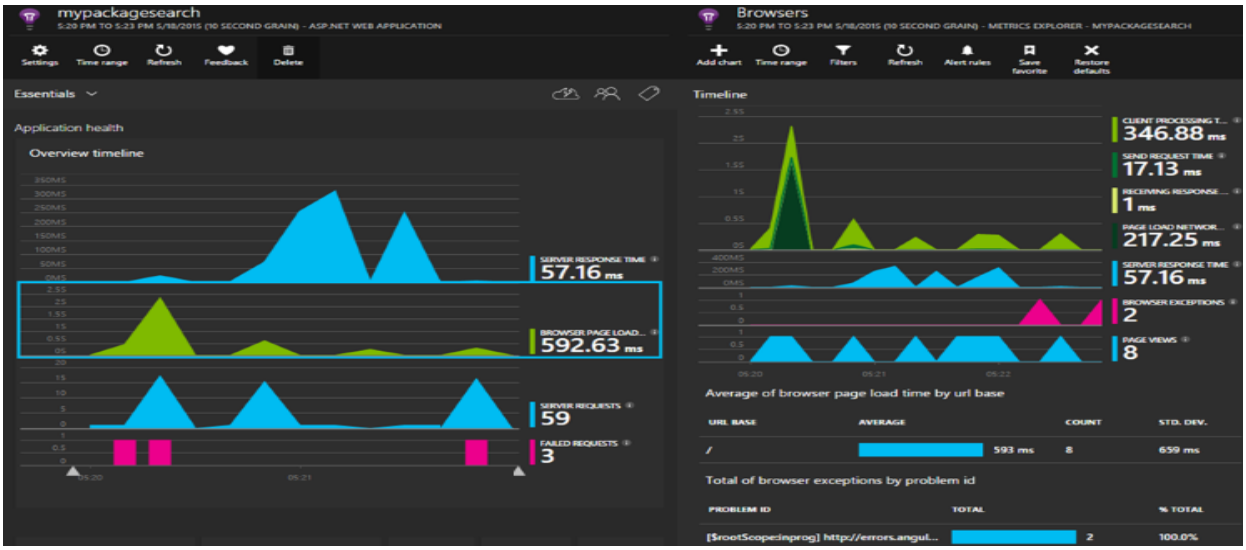
1. Trun on Application Insights.

2. Select Existing Resource.

3. Click on the Apply button.







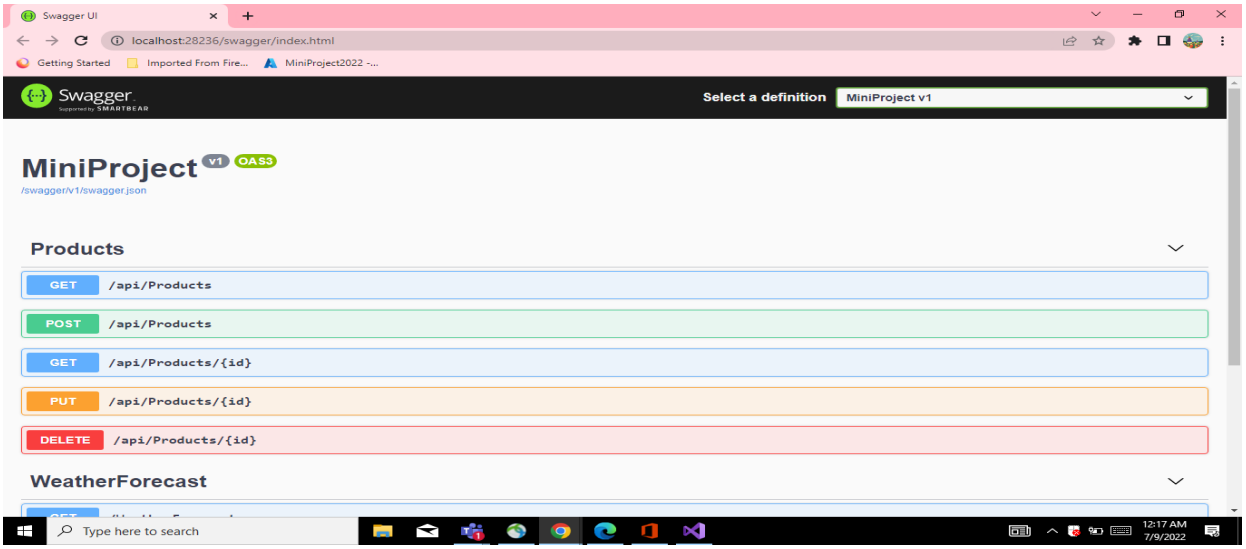
5.Configure Swagger for the Api :-

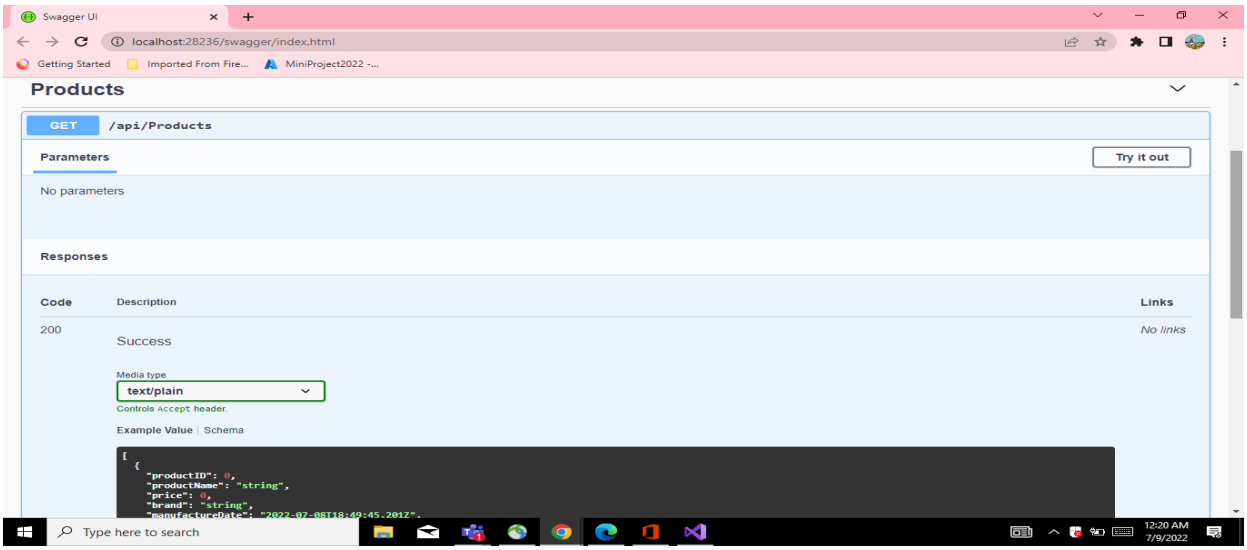
Swagger UI allows anyone — be it your development team or your end consumers — to visualize and interact with the API's resources without having any of the implementation logic in place. It's automatically generated from your OpenAPI (formerly known as Swagger) Specification, with the visual documentation making it easy for back end implementation and client side consumption.

PURPOSE OF API SWAGGER

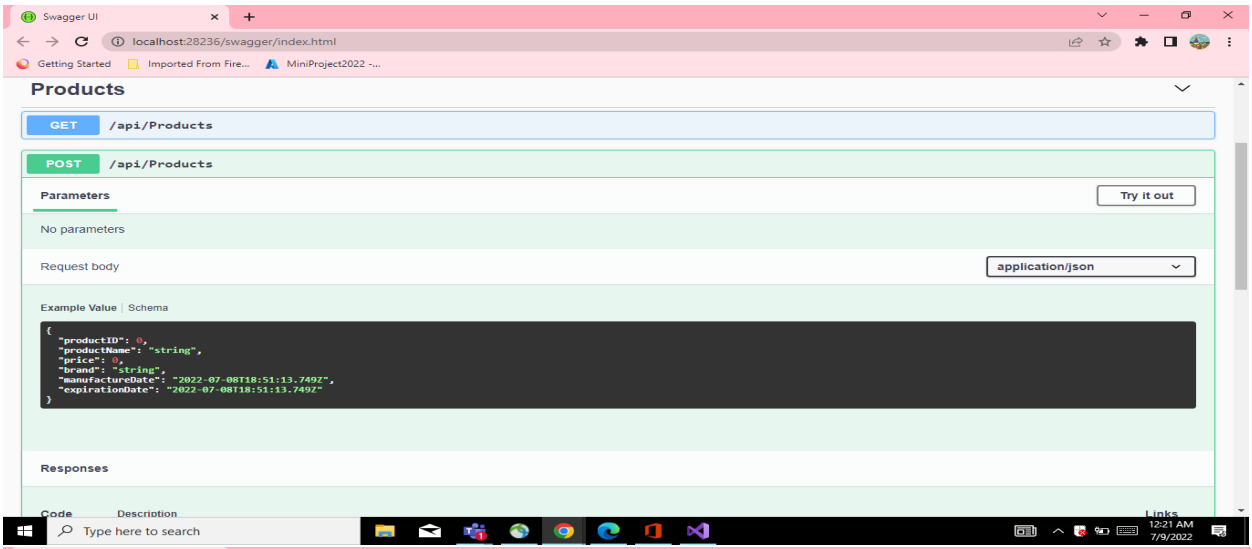
Swagger is an open source set of rules, specifications and tools for **developing and describing RESTful APIs**. The Swagger framework allows developers to create interactive, machine and human-readable API documentation.

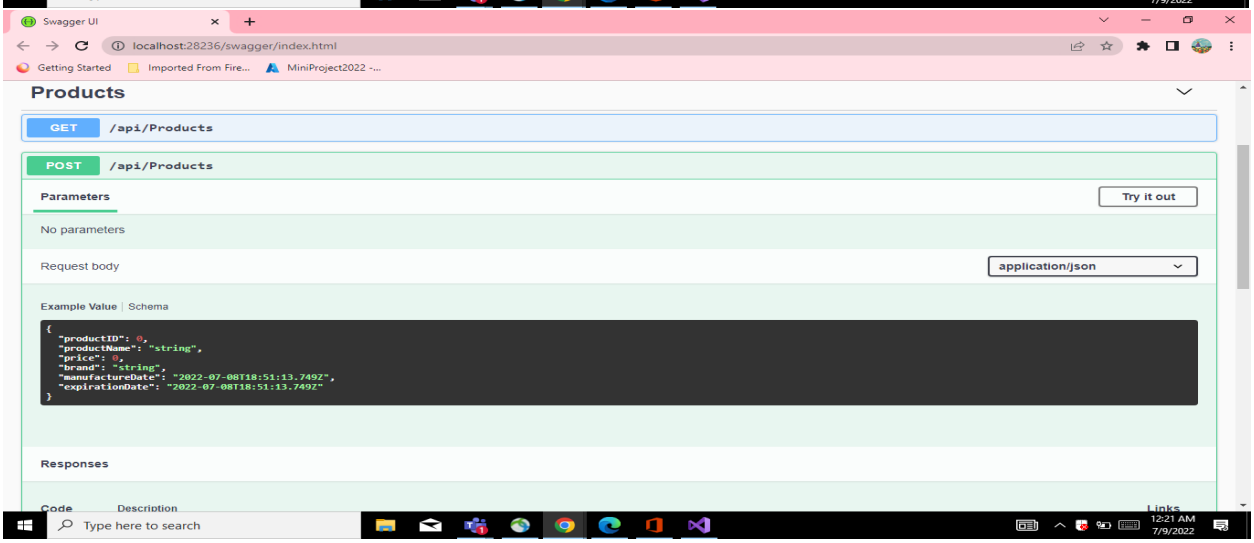
1

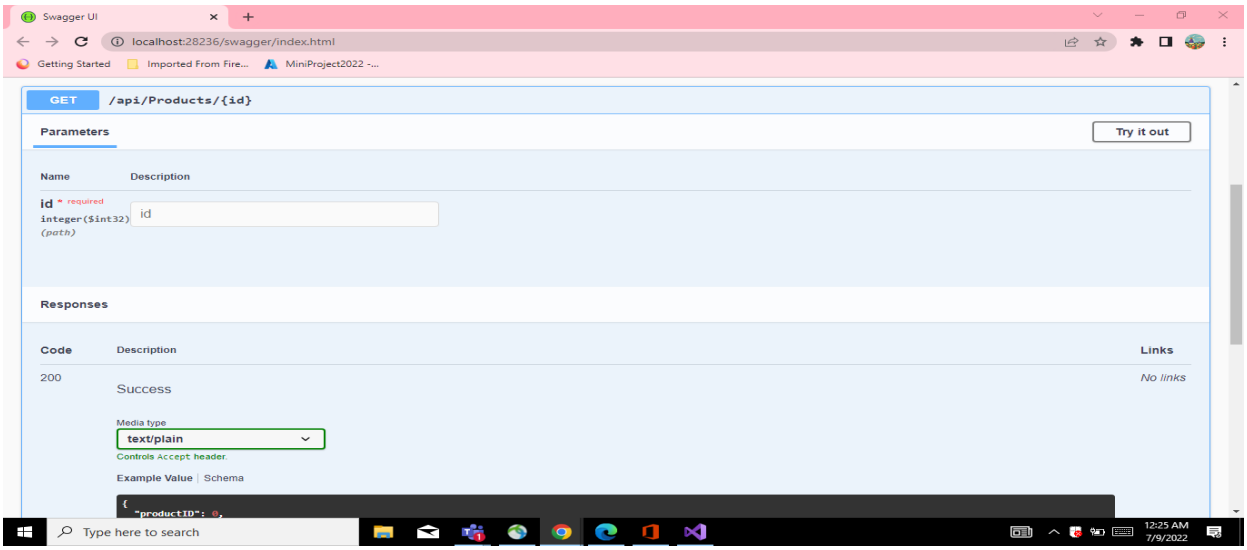

Swagger UI
localhost:28236/swagger/index.html
Getting Started
Imported From Fire...
MiniProject2022 -...
Swagger
Select a definition
MiniProject v1
MiniProject
v1
OAS3
/swagger/v1/swagger.json
Products
GET /api/Products
POST /api/Products
GET /api/Products/{id}
PUT /api/Products/{id}
DELETE /api/Products/{id}
WeatherForecast
Type here to search
12:17 AM
7/9/2022

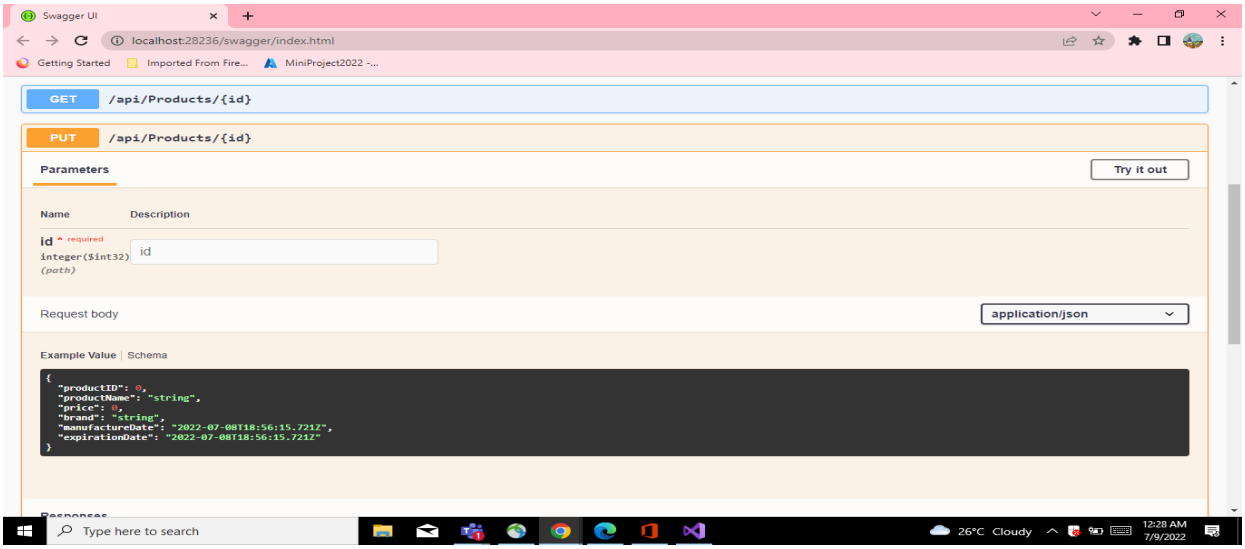

Swagger UI
localhost:28236/swagger/index.html
Getting Started
Imported From Fire...
MiniProject2022 -...
Products
GET /api/Products
Parameters
Try it out
No parameters
Responses
Code
Description
Links
200
Success
No links
Media type
text/plain
Controls Accept header.
Example Value | Schema
{
"productID": 0,
"productName": "string",
"price": 0,
"brand": "string",
"manufactureDate": "2022-07-08T18:49:45.201Z",
Type here to search
12:20 AM
7/9/2022

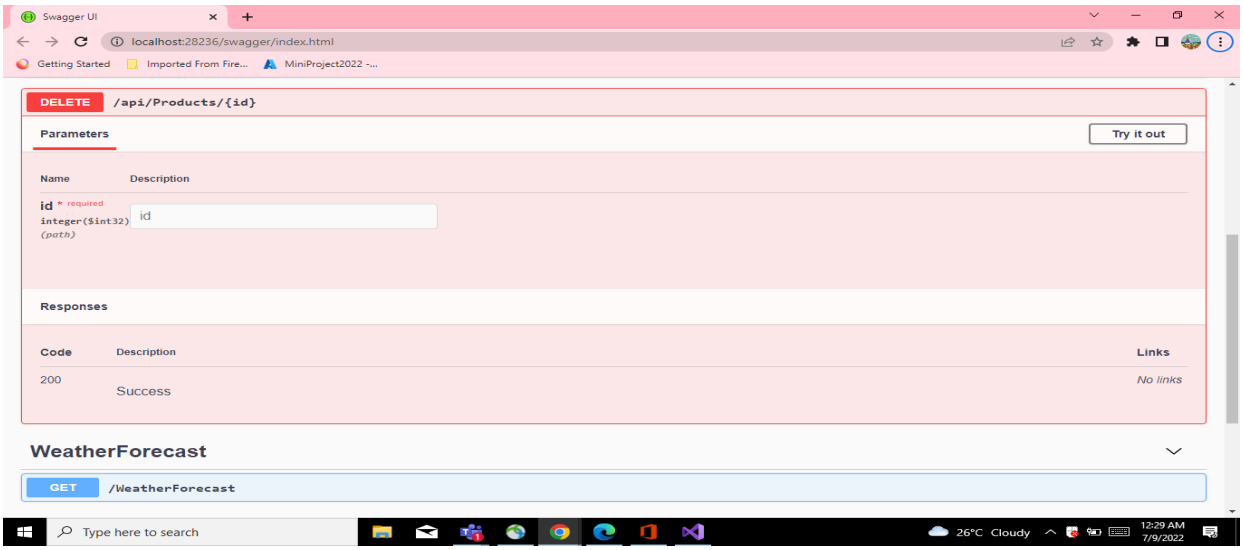
1


Swagger UI
localhost:28236/swagger/index.html
Getting Started
Imported From Fire...
MiniProject2022 -...
Products
GET /api/Products
POST /api/Products
Parameters
Try it out
No parameters
Request body
application/json
Example Value | Schema
{
"productID": 0,
"productName": "string",
"price": 0,
"brand": "string",
"manufactureDate": "2022-07-08T18:51:13.749Z",
"expirationDate": "2022-07-08T18:51:13.749Z"
}
Responses
Code
Description
Links
Type here to search
12:21 AM
7/9/2022


Swagger UI
localhost:28236/swagger/index.html
Getting Started
Imported From Fire...
MiniProject2022 -...
Products
GET /api/Products
POST /api/Products
Parameters
Try it out
No parameters
Request body
application/json
Example Value | Schema
{
"productID": 0,
"productName": "string",
"price": 0,
"brand": "string",
"manufactureDate": "2022-07-08T18:51:13.749Z",
"expirationDate": "2022-07-08T18:51:13.749Z"
}
Responses
Code
Description
Links
Type here to search
12:21 AM
7/9/2022


Swagger UI
localhost:28236/swagger/index.html
Getting Started
Imported From Fire...
MiniProject2022 -...
GET /api/Products/{id}
Parameters
Try it out
Name
Description
id * required
integer($int32)
(path)
id
Responses
Code
Description
Links
200
Success
No links
Media type
text/plain
Controls Accept header.
Example Value | Schema
{
"productID": 0,
Type here to search
12:25 AM
7/9/2022





6.Work with Log Analytics with the sample logs available :-

Log Analytics is a tool in the Azure portal to edit and run log queries from data collected by Azure Monitor logs and interactively analyze their results.

You can use Log Analytics queries to retrieve records that match particular criteria, identify trends, analyze patterns, and provide various insights into your data.

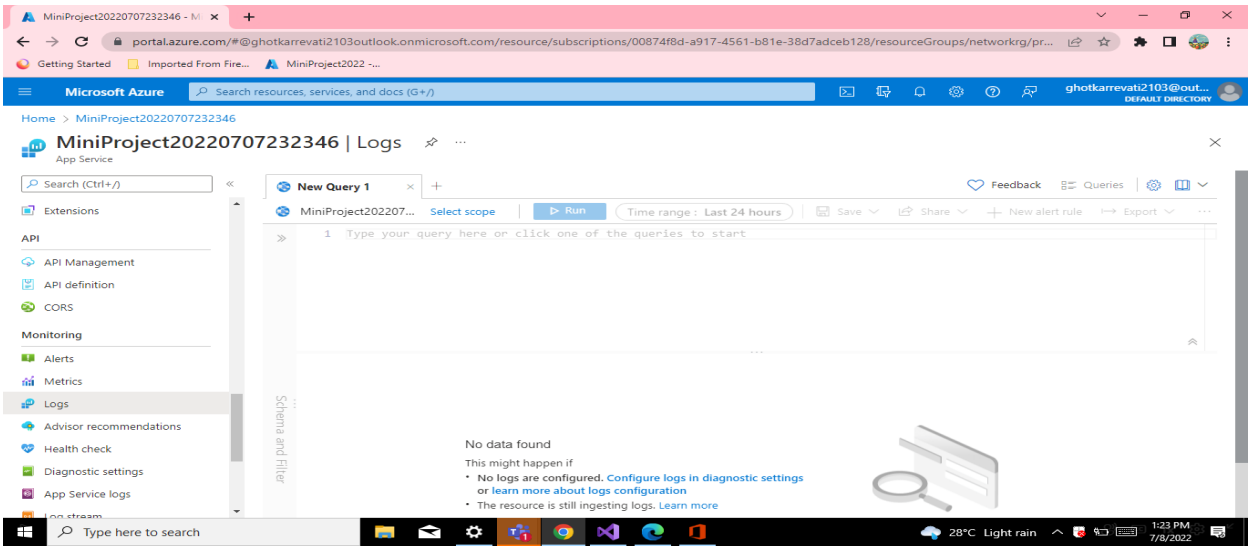
• You might write a simple query that returns a set of records and then use features of Log Analytics to sort, filter, and analyze them. Or you might write a more advanced query to perform statistical analysis and visualize the results in a chart to identify a particular trend.

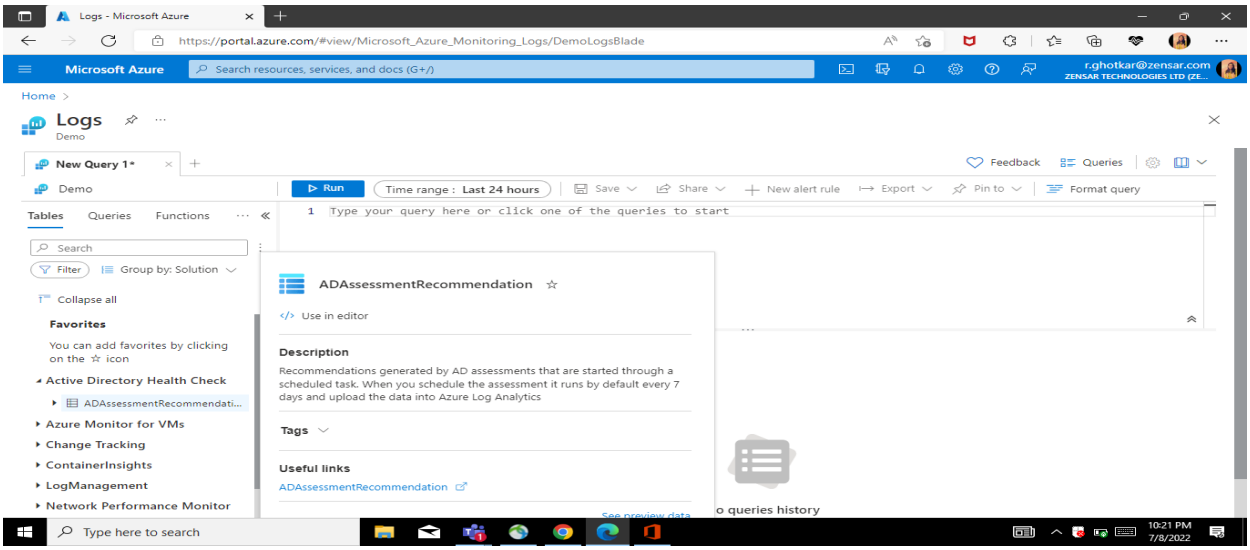
• If you start Log Analytics from the Azure Monitor menu or the Log Analytics workspaces menu, you'll have access to all the records in a workspace. If you select Logs from another type of resource, your data will be limited to log data for that resource. For more information, see Log query scope and time range in Azure Monitor Log Analytics. How Logs work by using Query language as shown in below images.

1. Open Azure portal and click on Logs.

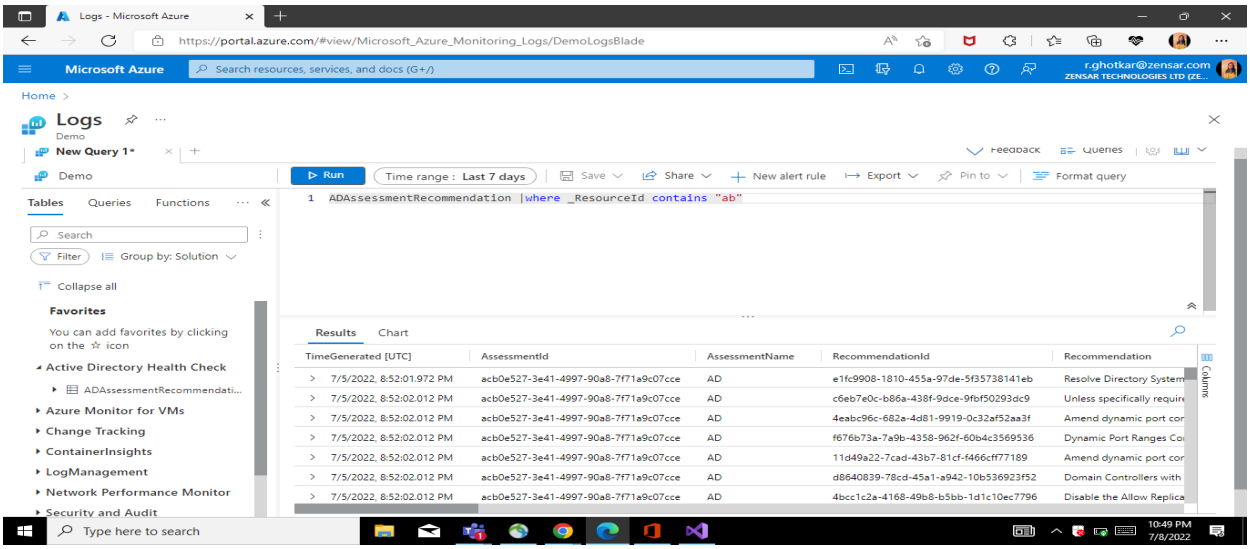
2. Select the Tables what you check.

3. Write a query logic and click on Run



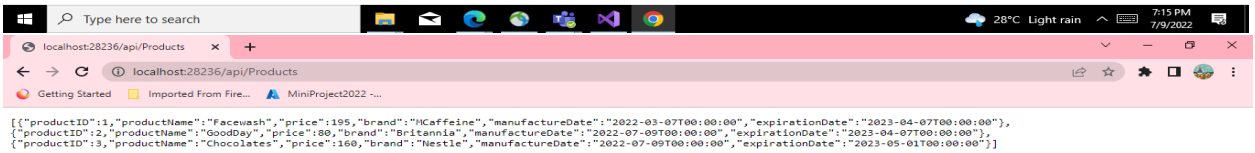


1


Logs - Microsoft Azure
https://portal.azure.com/#view/Microsoft_Azure_Monitoring_Logs/DemoLogsBlade
Microsoft Azure
Search resources, services, and docs (G+/)
r.ghotkar@zensar.com
ZENSAR TECHNOLOGIES LTD (ZE...
Home
Logs
Demo
New Query 1*
Demo
Run
Time range : Last 7 days
Save
Share
New alert rule
Export
Pin to
Format query
Tables
Queries
Functions
Search
Filter
Group by: Solution
Collapse all
Favorites
You can add favorites by clicking on the ☆ icon
Active Directory Health Check
ADAssessmentRecommendati...
Azure Monitor for VMs
Change Tracking
ContainerInsights
LogManagement
Network Performance Monitor
Security and Audit
1 ADAssessmentRecommendation |where _ResourceId contains "ab"
Results
Chart
TimeGenerated [UTC]
AssessmentId
AssessmentName
RecommendationId
Recommendation
7/5/2022, 8:52:01.972 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD e1fc9908-1810-455a-97de-5f35738141eb Resolve Directory System
7/5/2022, 8:52:02.012 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD c6eb7e0c-b86a-438f-9dce-9fbf50293dc9 Unless specifically requir
7/5/2022, 8:52:02.012 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD 4eabc96c-682a-4d81-9919-0c32af52aa3f Amend dynamic port cor
7/5/2022, 8:52:02.012 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD f676b73a-7a9b-4358-962f-60b4c3569536 Dynamic Port Ranges Co
7/5/2022, 8:52:02.012 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD 11d49a22-7cad-43b7-81cf-f466cff77189 Amend dynamic port cor
7/5/2022, 8:52:02.012 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD d8640839-78cd-45a1-a942-10b536923f52 Domain Controllers with
7/5/2022, 8:52:02.012 PM acb0e527-3e41-4997-90a8-7f71a9c07cce AD 4bcc1c2a-4168-49b8-b5bb-1d1c10ec7796 Disable the Allow Replica
Columns
Type here to search
10:49 PM
7/8/2022

1


localhost:28236/WeatherForecast
localhost:28236/WeatherForecast
Getting Started
Imported From Fire...
MiniProject2022 -...
[{"date":"2022-07-10T19:15:48.5359313+05:30","temperatureC":38,"temperatureF":100,"summary":"Mild"},{"date":"2022-07-
11T19:15:48.5373548+05:30","temperatureC":39,"temperatureF":102,"summary":"Scorching"},{"date":"2022-07-12T19:15:48.5373636+05:30","temperatureC":-8,"temperatureF":18,"summary":"Warm"},
{"date":"2022-07-13T19:15:48.5373645+05:30","temperatureC":22,"temperatureF":71,"summary":"Chilly"},{"date":"2022-07-
14T19:15:48.5373649+05:30","temperatureC":36,"temperatureF":96,"summary":"Balmy"}]


Type here to search
28°C Light rain
7:15 PM
7/9/2022
localhost:28236/api/Products
localhost:28236/api/Products
Getting Started
Imported From Fire...
MiniProject2022 -...
[{"productID":1,"productName":"Facewash","price":195,"brand":"MCaffeine","manufactureDate":"2022-03-07T00:00:00","expirationDate":"2023-04-07T00:00:00"},
{"productID":2,"productName":"GoodDay","price":80,"brand":"Britannia","manufactureDate":"2022-07-09T00:00:00","expirationDate":"2023-04-07T00:00:00"},
{"productID":3,"productName":"Chocolates","price":160,"brand":"Nestle","manufactureDate":"2022-07-09T00:00:00","expirationDate":"2023-05-01T00:00:00"}]


Type here to search
28°C Light rain
7:18 PM
7/9/2022