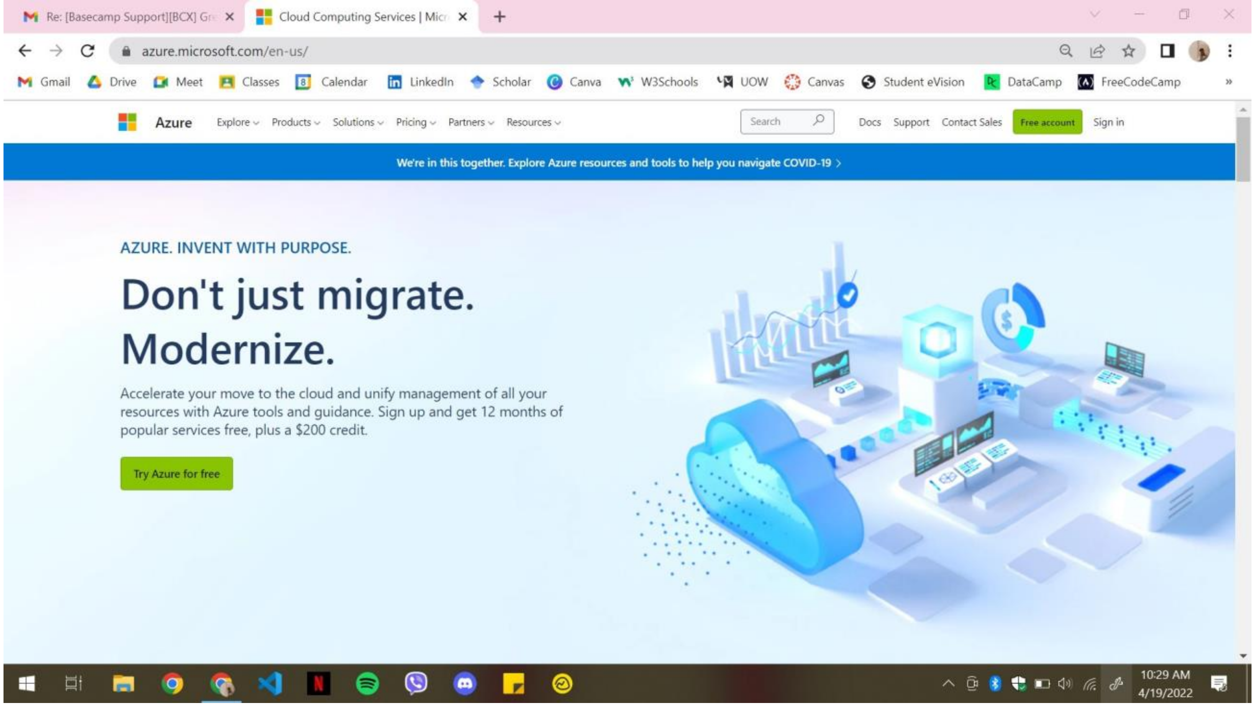
UNIVERSITY PARTNER

DISTRIBUTE AND CLOUD SYSTEMS PROGRAMMING (5CS022)

WEEK 5 WORKSHOP

Student Id	: 2065697
Student Name	: Dhiraj Kumar Sah Kanu
Group	: L5CG12
Submitted on	: April 19, 2022

Step 1: Follow the link https://azure.microsoft.com/ or search azure Microsoft in your web browser.



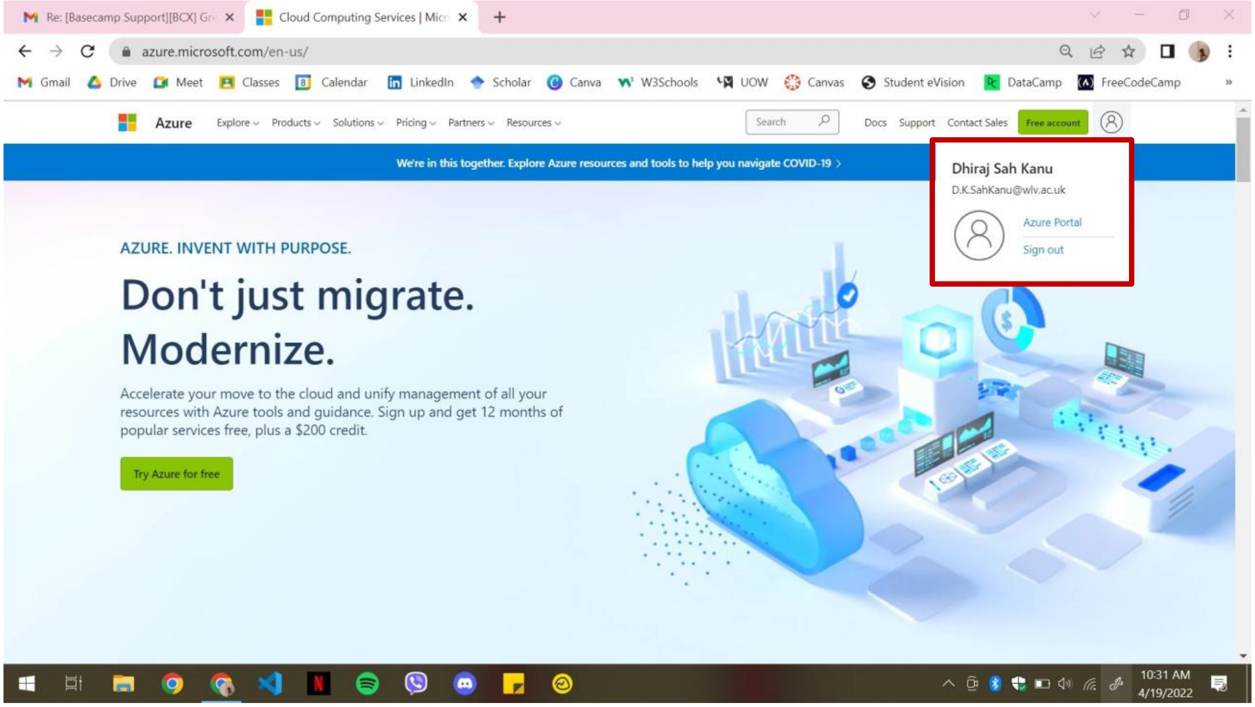
We're in this together. Explore Azure resources and tools to help you navigate COVID-19 ›

AZURE. INVENT WITH PURPOSE.

Don't just migrate. Modernize.

Accelerate your move to the cloud and unify management of all your resources with Azure tools and guidance. Sign up and get 12 months of popular services free, plus a $200 credit.

Step 2: Login into your azure account using university email id, so that you could use azure for students for free. I have already logged in using my university email.



Dhiraj Sah Kanu

D.K.SahKanu@wlv.ac.uk

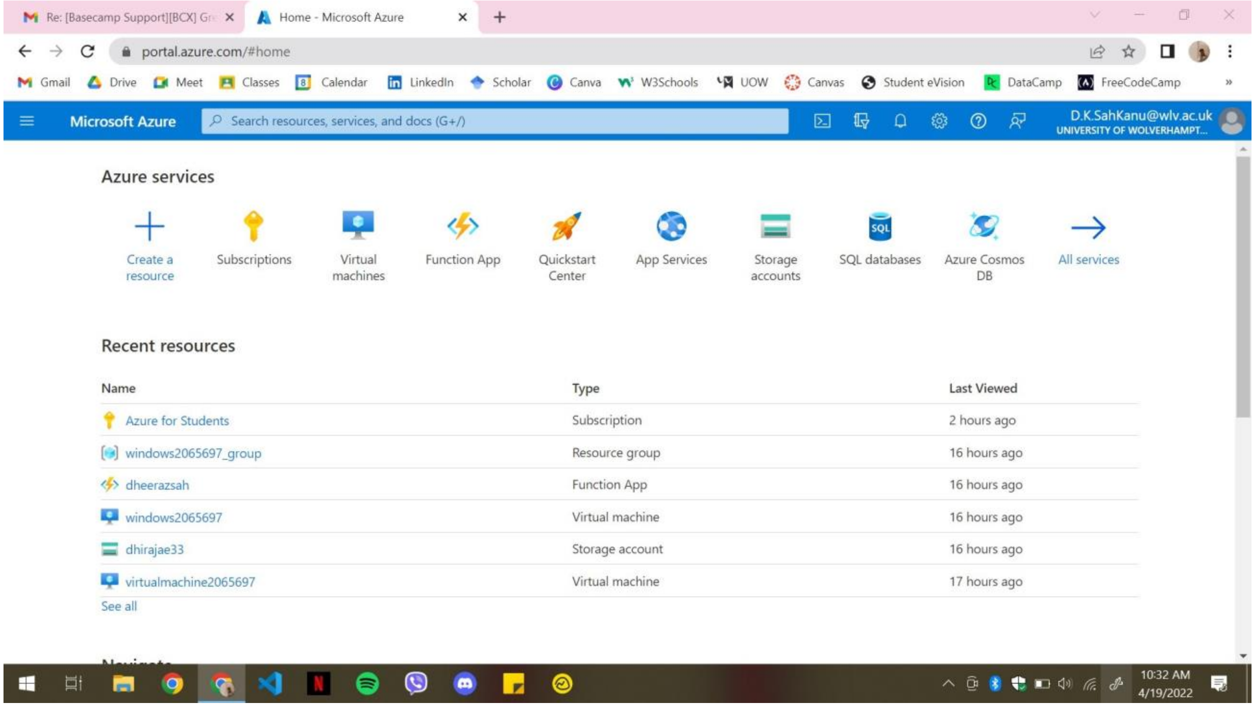
We're in this together. Explore Azure resources and tools to help you navigate COVID-19 ›

AZURE. INVENT WITH PURPOSE.

Don't just migrate. Modernize.

Accelerate your move to the cloud and unify management of all your resources with Azure tools and guidance. Sign up and get 12 months of popular services free, plus a $200 credit.

Step 3: After signing in to azure portal successfully, you will be redirected to the Azure Portal page. This is where we'll manage and track things like servers, subscriptions, virtual machines, and so on. You can see the recent resources which I have been using.

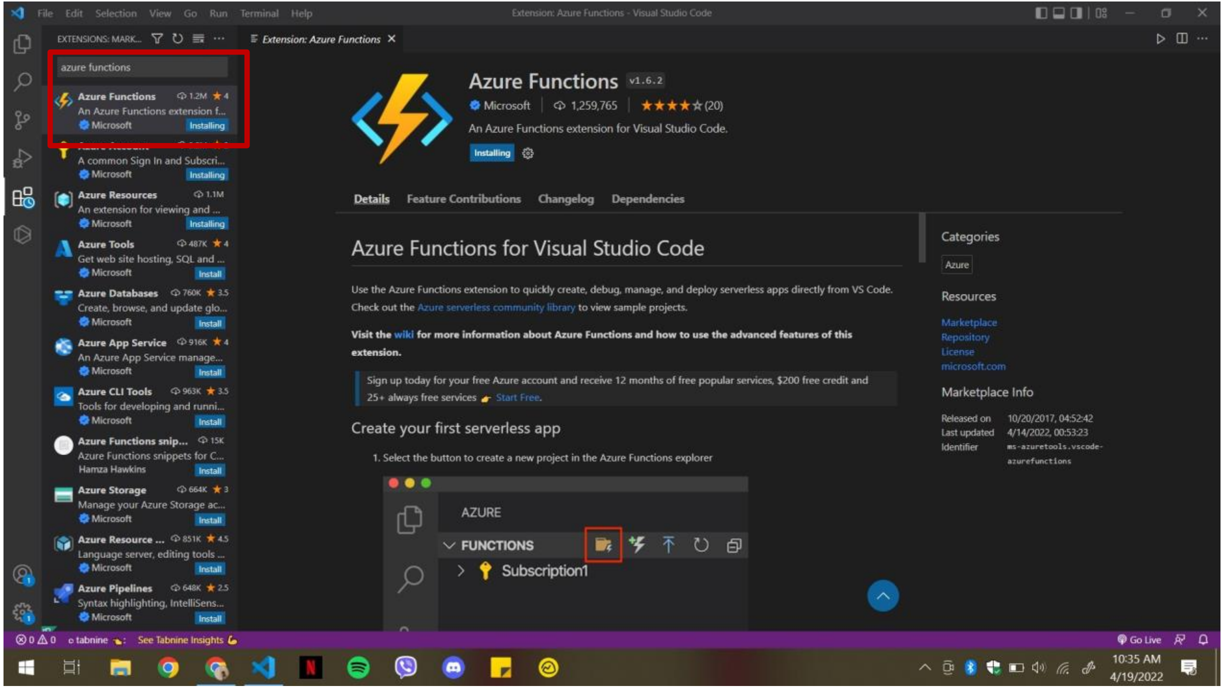


Recent resources

Name	Type	Last Viewed
Azure for Students	Subscription	2 hours ago
windows2065697_group	Resource group	16 hours ago
dheerazsah	Function App	16 hours ago
windows2065697	Virtual machine	16 hours ago
dhirajae33	Storage account	16 hours ago
virtualmachine2065697	Virtual machine	17 hours ago

See all

Step 4: Now to write, test, and deploy functions to Azure, azure functions extensions must be installed in Visual Studio Code. On the left side of Visual Studio Code, click on the cube-like icon. Then install the azure functions option.



Azure Functions for Visual Studio Code

Use the Azure Functions extension to quickly create, debug, manage, and deploy serverless apps directly from VS Code. Check out the Azure serverless community library to view sample projects.

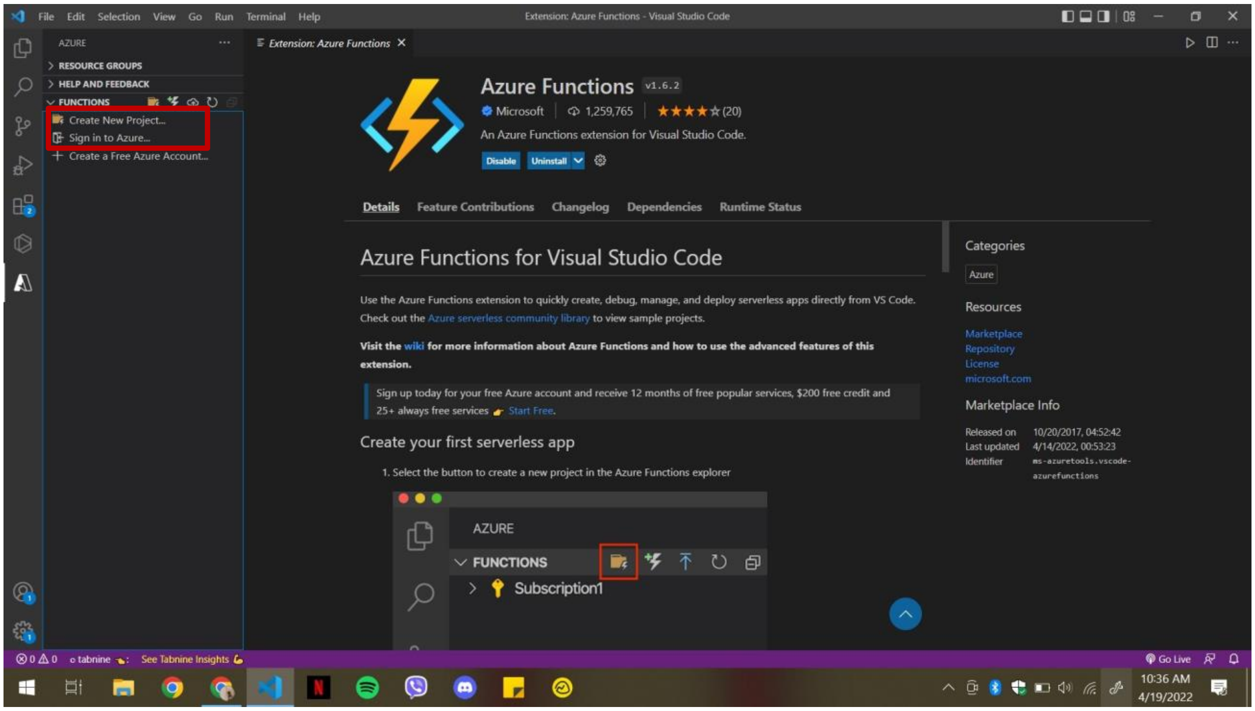
Visit the wiki for more information about Azure Functions and how to use the advanced features of this extension.

> Sign up today for your free Azure account and receive 12 months of free popular services, $200 free credit and 25+ always free services Start Free.

Create your first serverless app

1. Select the button to create a new project in the Azure Functions explorer

Step 5: Now, we will have to click on azure logo and click on sign in. I have already signed into my account here. You will be re-directed to Microsoft login page where you need to log in with your azure account. After signing in you need to click on create new project.



An Azure Functions extension for Visual Studio Code.

Azure Functions for Visual Studio Code

Use the Azure Functions extension to quickly create, debug, manage, and deploy serverless apps directly from VS Code. Check out the Azure serverless community library to view sample projects.

Visit the wiki for more information about Azure Functions and how to use the advanced features of this extension.

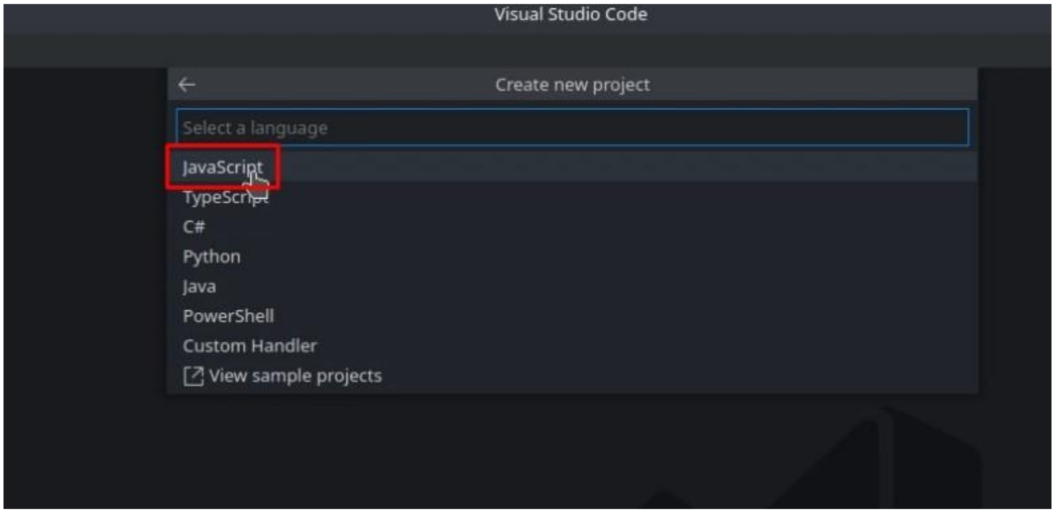
> Sign up today for your free Azure account and receive 12 months of free popular services, $200 free credit and 25+ always free services 👉 Start Free.

Create your first serverless app

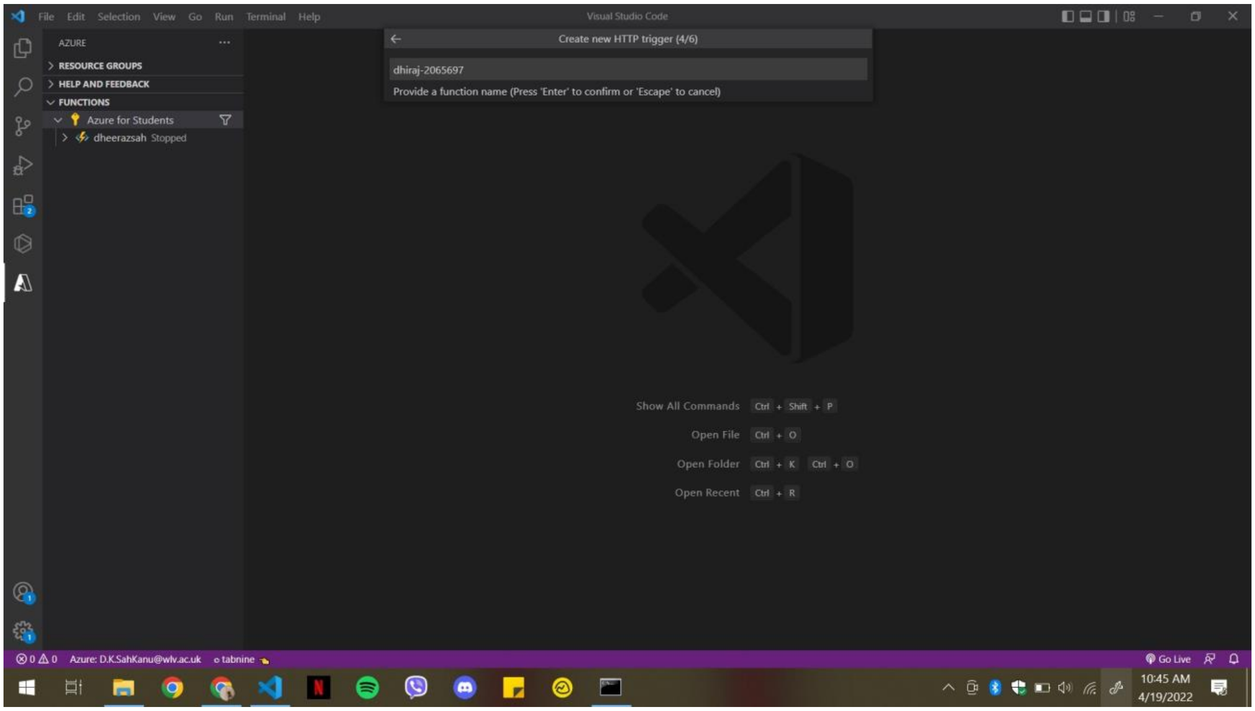
1. Select the button to create a new project in the Azure Functions explorer

Released on	10/20/2017, 04:52:42
Last updated	4/14/2022, 00:53:23
Identifier	ms-azuretools.vscode-azurefunctions

Step 6: Create a new project in the suitable directory, then select a language to create a function.



Step 7: Now you have to create a new trigger, you will see the list of triggers. For now, choose the HTTP Trigger. Trigger helps to run a function, I have created a trigger named dhiraj-2065697 already.

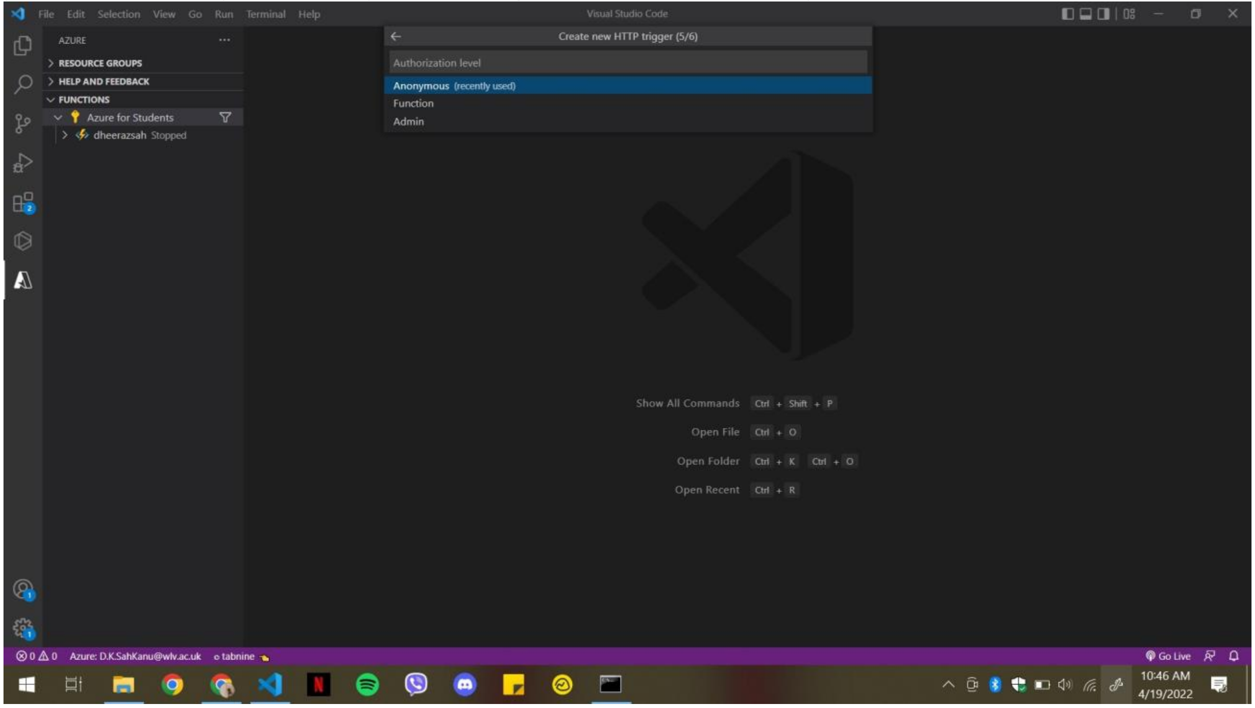


Create new HTTP trigger (4/6)

dhiraj-2065697

Provide a function name (Press 'Enter' to confirm or 'Escape' to cancel)

Step 8: Now you have to choose an authorization level. The authorization level must be chosen. The function's endpoint has to be accessed. If you choose anonymous API key is not needed, if you choose function, you must provide a function-specific API key and choosing admin needs a master key.

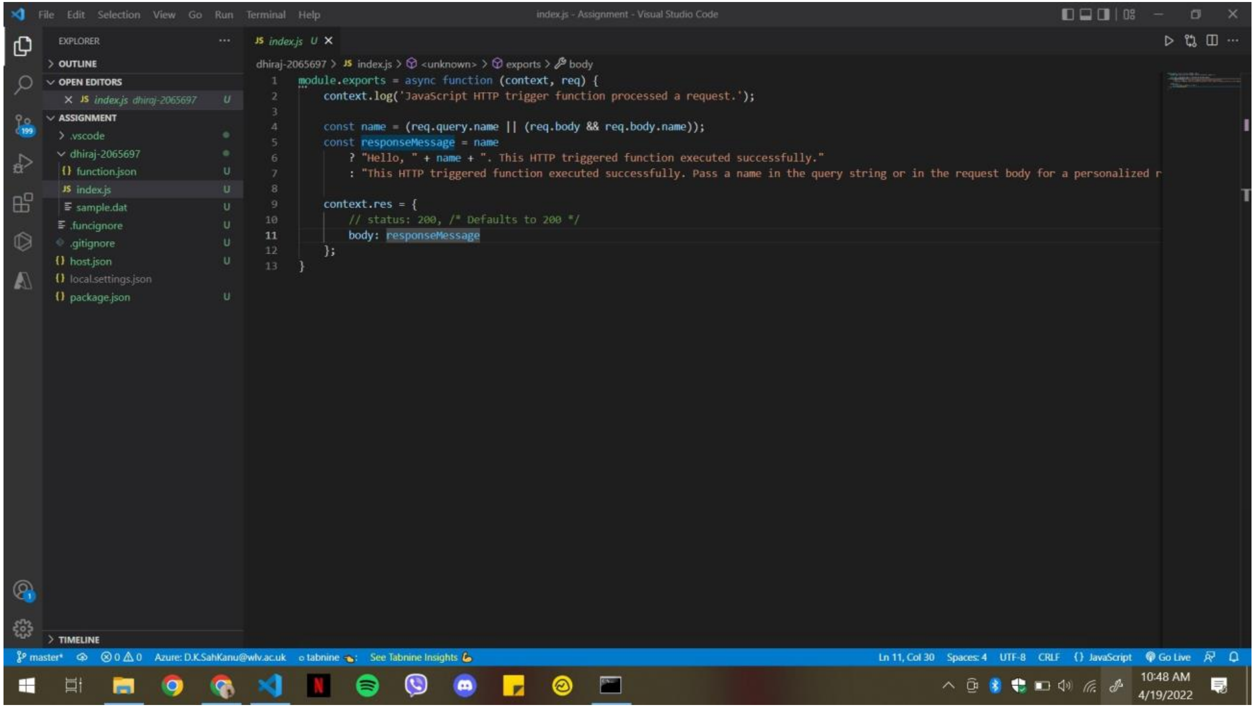


Create new HTTP trigger (5/6)

Authorization level

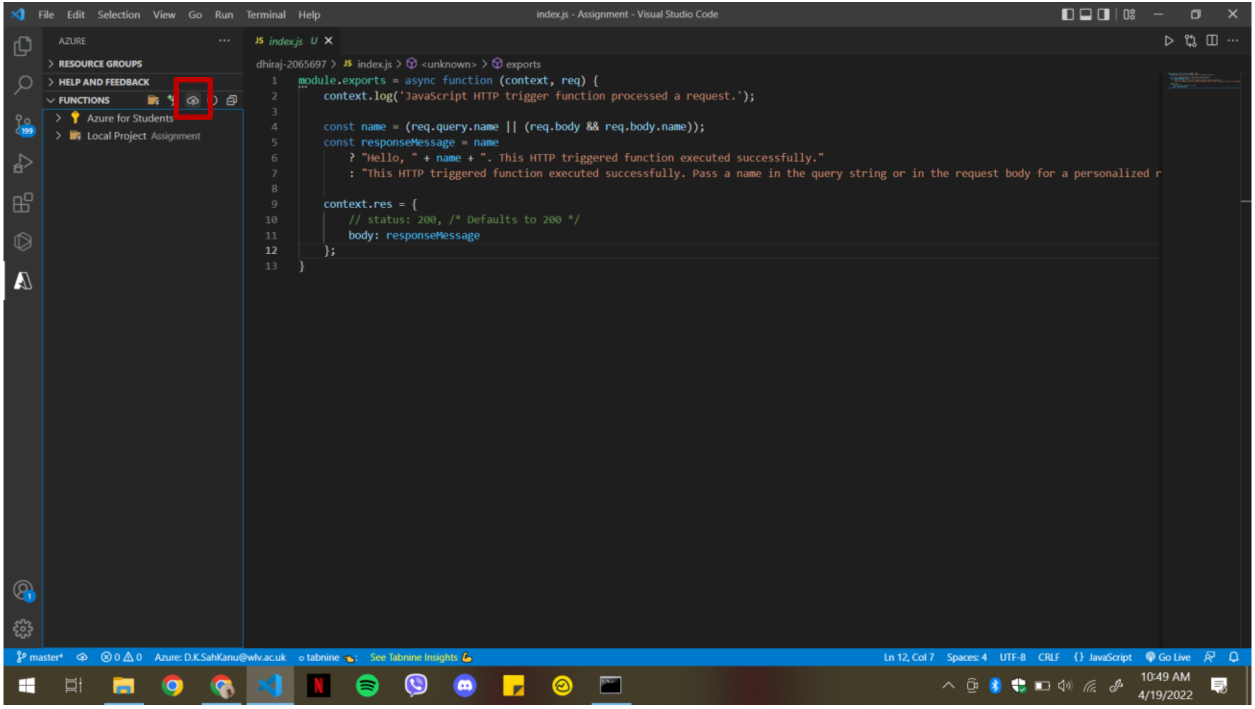
Anonymous (recently used)
Function
Admin

Step 9: After authorization you will be able to see a default code on your screen.


File Edit Selection View Go Run Terminal Help
index.js - Assignment - Visual Studio Code
EXPLORER
OUTLINE
OPEN EDITORS
index.js dhiraj-2065697 U
ASSIGNMENT
.vscode
dhiraj-2065697
function.json U
index.js U
sample.dat U
.funcignore U
.gitignore U
host.json U
local.settings.json
package.json U
TIMELINE
dhiraj-2065697 > index.js > <unknown> > exports > body
master* ⊗ 0 ⚠ 0 Azure: D.K.SahKanu@wlv.ac.uk tabnine See Tabnine Insights
Ln 11, Col 30 Spaces: 4 UTF-8 CRLF {} JavaScript Go Live
10:48 AM
4/19/2022

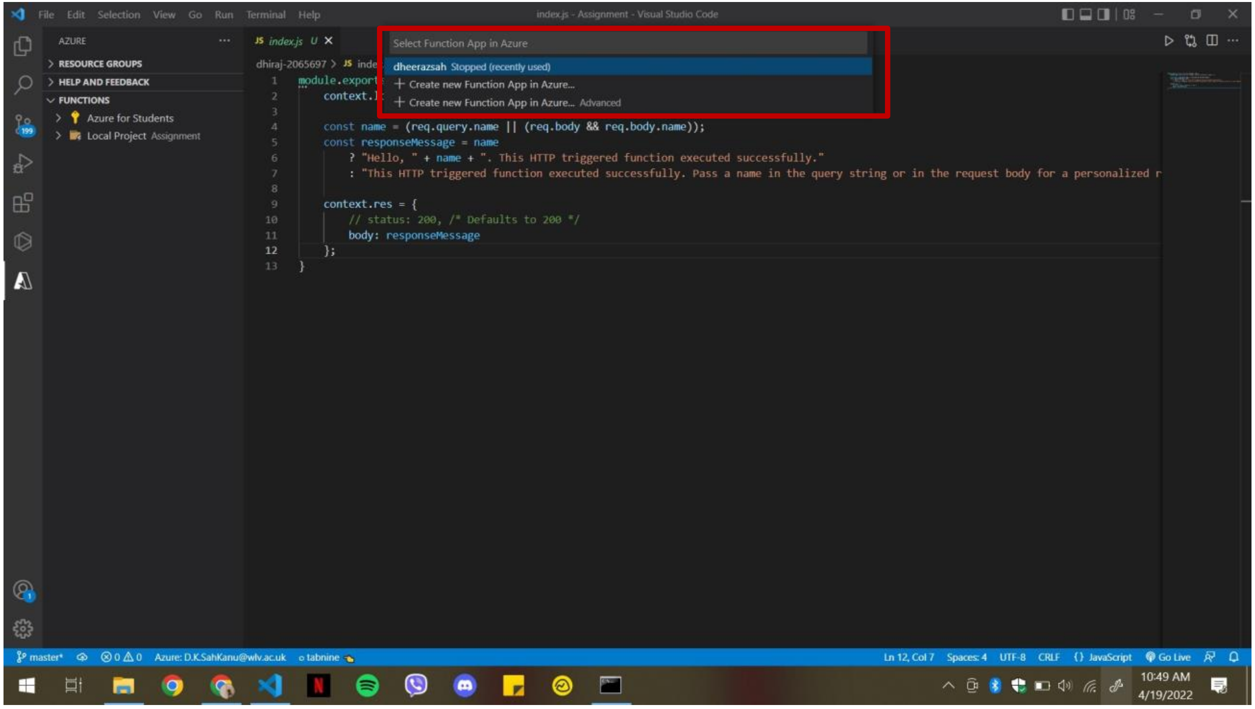
```javascript
module.exports = async function (context, req) {
    context.log('JavaScript HTTP trigger function processed a request.');

    const name = (req.query.name || (req.body && req.body.name));
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```

Step 10: Click on the azure logo on the left navigation and click on a small cloud icon to deploy the function.


File Edit Selection View Go Run Terminal Help
index.js - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
dhiraj-2065697 > index.js > <unknown> > exports
master* ⊗ 0 ⚠ 0 Azure: D.K.SahKanu@wlv.ac.uk tabnine See Tabnine Insights
Ln 12, Col 7 Spaces: 4 UTF-8 CRLF {} JavaScript Go Live
10:49 AM
4/19/2022

```javascript
module.exports = async function (context, req) {
    context.log('JavaScript HTTP trigger function processed a request.');

    const name = (req.query.name || (req.body && req.body.name));
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```

Step 11: Click on create new Function App in Azure and name your function.



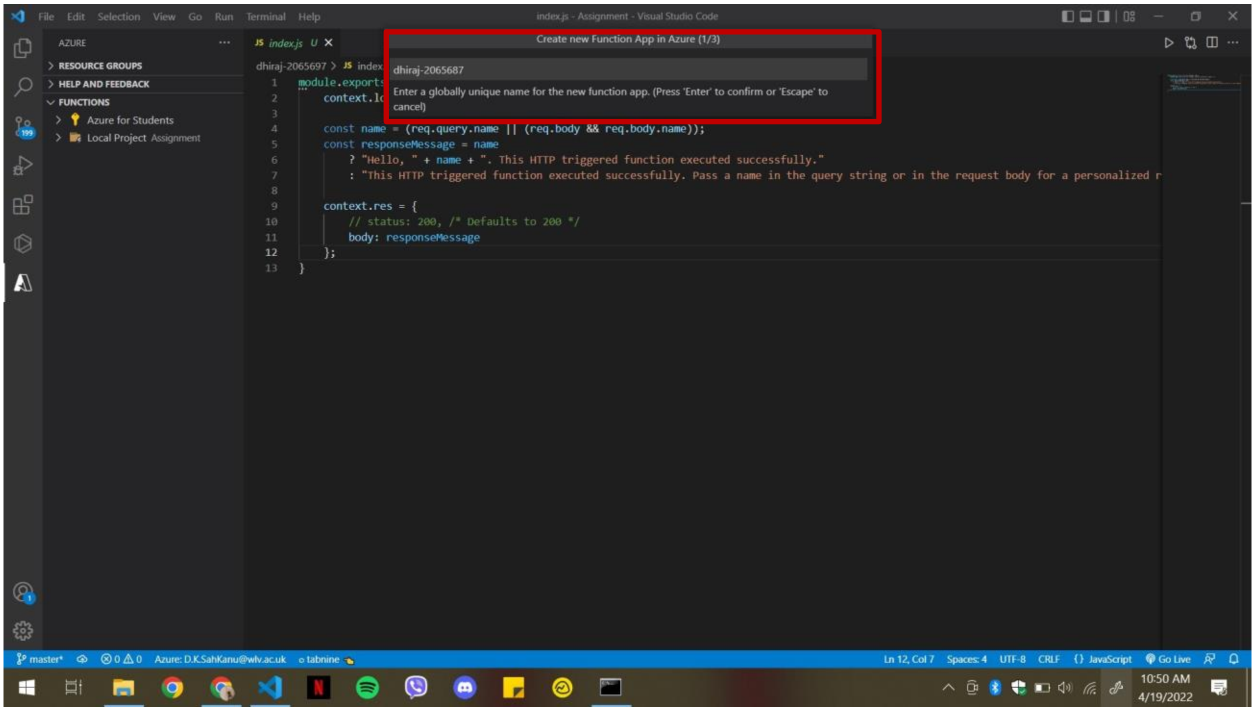
Select Function App in Azure

dheerazsah Stopped (recently used)

+ Create new Function App in Azure...

+ Create new Function App in Azure... Advanced

```
module.export
    context.l

    const name = (req.query.name || (req.body && req.body.name));
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```



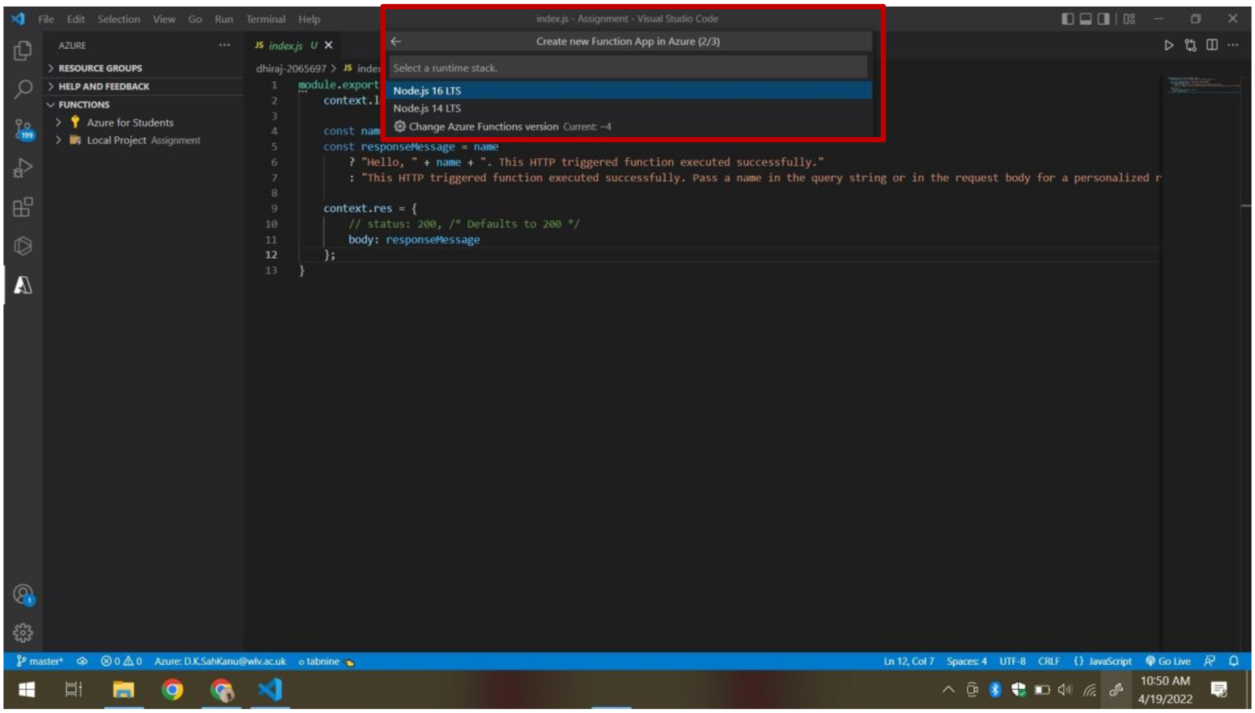
Create new Function App in Azure (1/3)

dhiraj-2065687

Enter a globally unique name for the new function app. (Press 'Enter' to confirm or 'Escape' to cancel)

```
module.exports
    context.lo

    const name = (req.query.name || (req.body && req.body.name));
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```

Step 12: Now select node.js 16 LTS as the runtime stack. The run time stack is a way for storing the program and handling local non-static variables.


File Edit Selection View Go Run Terminal Help
index.js - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
index.js U
dhiraj-2065697 > index
master* ⊗0 ⚠0 Azure: D.K.SahKanu@wlv.ac.uk tabnine
Ln 12, Col 7 Spaces: 4 UTF-8 CRLF {} JavaScript Go Live
10:50 AM
4/19/2022

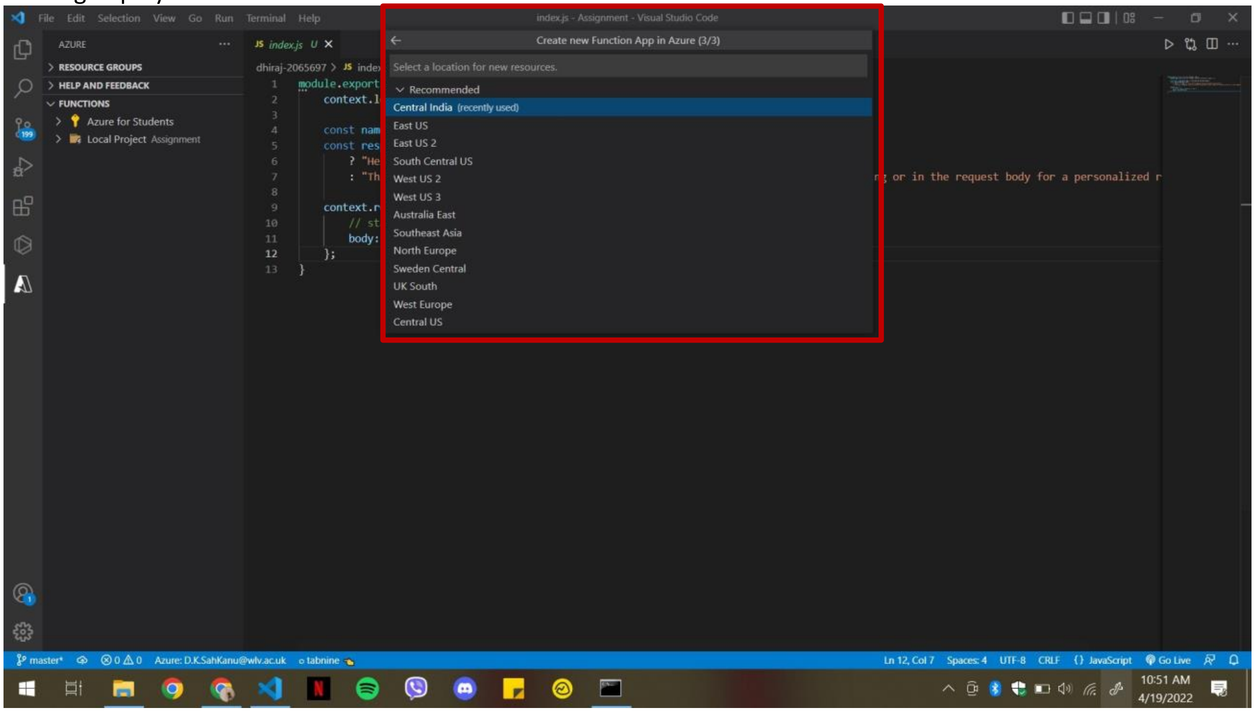
Create new Function App in Azure (2/3)

Select a runtime stack.

- Node.js 16 LTS
- Node.js 14 LTS
- Change Azure Functions version Current: ~4

```
module.export
    context.l

    const nam
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```

Step 13: Now choose a location, here I have chosen Central India. This will create your function in Central India and is being deployed in Azure.


File Edit Selection View Go Run Terminal Help
index.js - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
index.js U
dhiraj-2065697 > index
master* ⊗0 ⚠0 Azure: D.K.SahKanu@wlv.ac.uk tabnine
Ln 12, Col 7 Spaces: 4 UTF-8 CRLF {} JavaScript Go Live
10:51 AM
4/19/2022

Create new Function App in Azure (3/3)

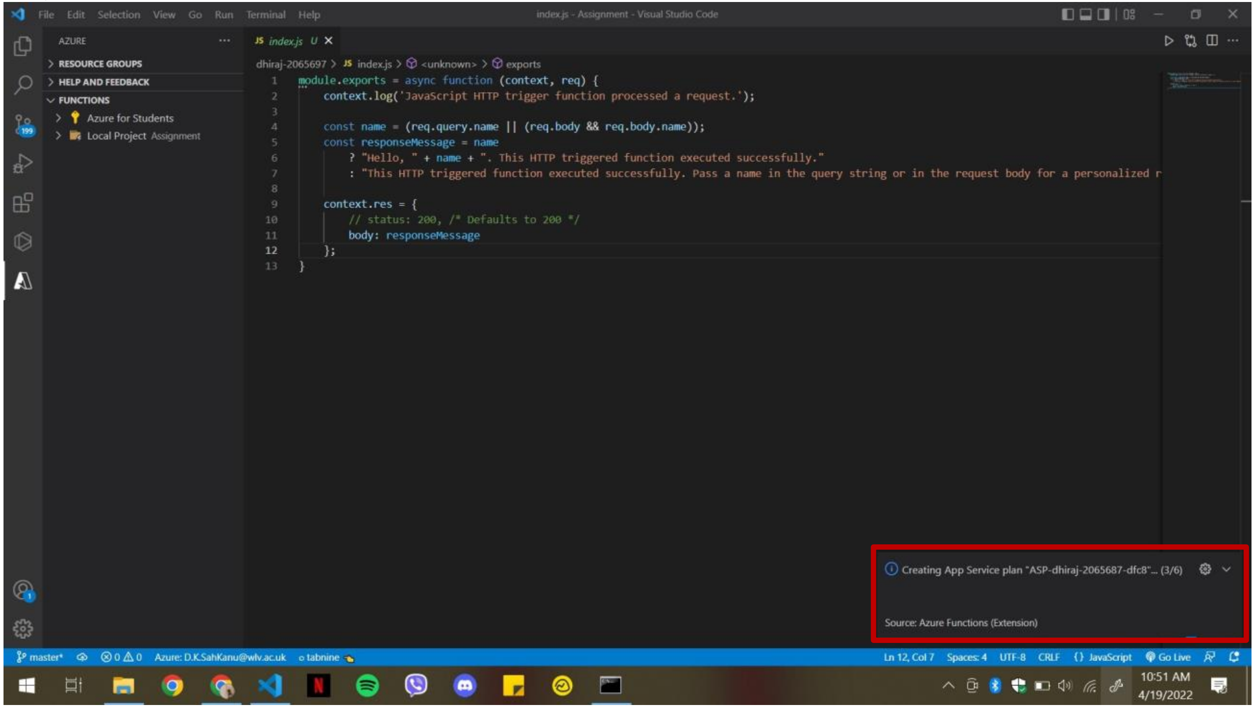
Select a location for new resources.

Recommended

- Central India (recently used)
- East US
- East US 2
- South Central US
- West US 2
- West US 3
- Australia East
- Southeast Asia
- North Europe
- Sweden Central
- UK South
- West Europe
- Central US

```
module.export
    context.l

    const nam
    const res
        ? "He
        : "Th                                                        g or in the request body for a personalized r

    context.r
        // st
        body:
    };
}
```

Step 14: Now here the app service plan is being created. In your case you will see creating resource group option for your function.

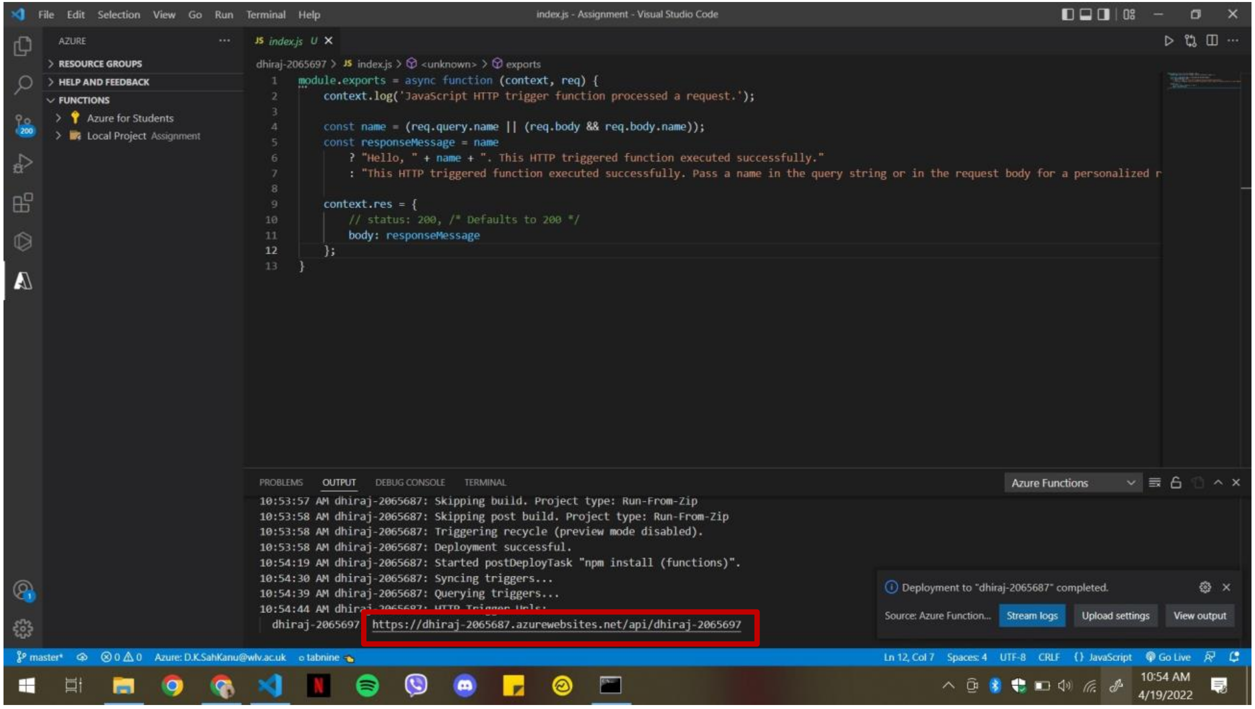

File Edit Selection View Go Run Terminal Help
index.js - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
index.js U
dhiraj-2065697 > index.js > <unknown> > exports
master* ⊗ 0 ⚠ 0 Azure: D.K.SahKanu@wlv.ac.uk tabnine
Ln 12, Col 7 Spaces: 4 UTF-8 CRLF {} JavaScript Go Live
10:51 AM
4/19/2022

```
module.exports = async function (context, req) {
    context.log('JavaScript HTTP trigger function processed a request.');

    const name = (req.query.name || (req.body && req.body.name));
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```

ⓘ Creating App Service plan "ASP-dhiraj-2065687-dfc8"... (3/6)

Source: Azure Functions (Extension)

Step 15: After the completion of process click on the http trigger URL link.


File Edit Selection View Go Run Terminal Help
index.js - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
index.js U
dhiraj-2065697 > index.js > <unknown> > exports
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Azure Functions
master* ⊗ 0 ⚠ 0 Azure: D.K.SahKanu@wlv.ac.uk tabnine
Ln 12, Col 7 Spaces: 4 UTF-8 CRLF {} JavaScript Go Live
10:54 AM
4/19/2022

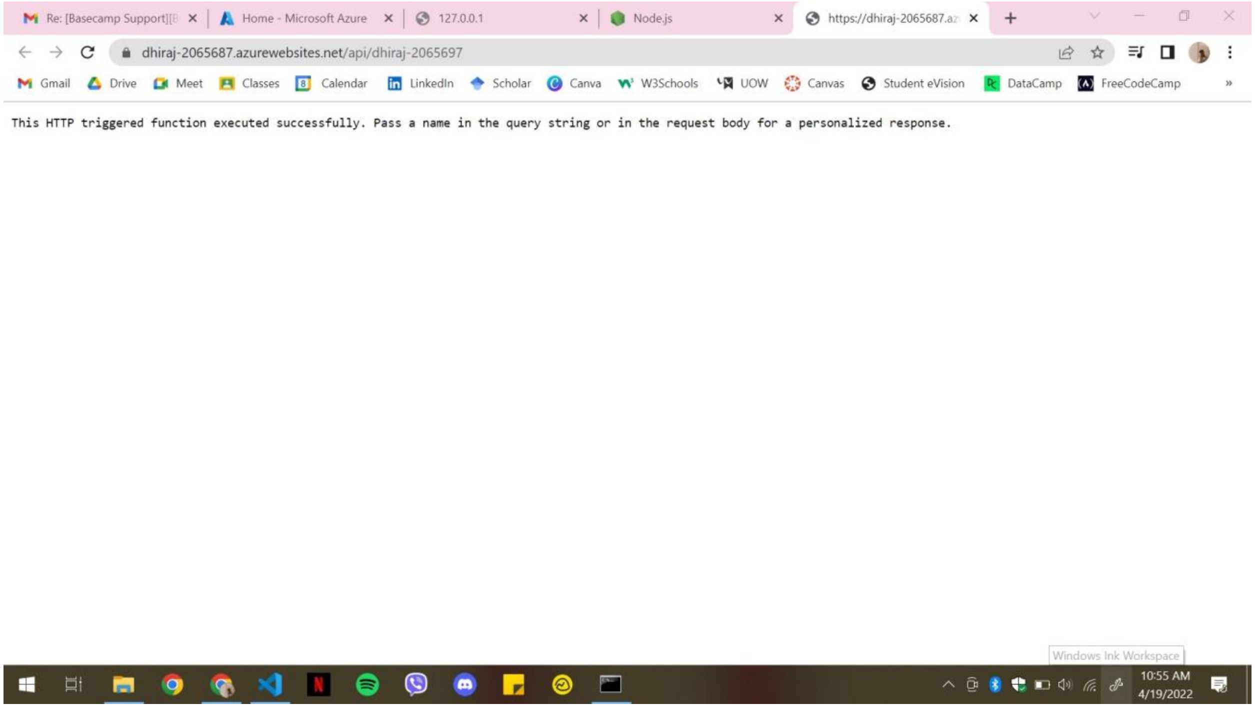
```
module.exports = async function (context, req) {
    context.log('JavaScript HTTP trigger function processed a request.');

    const name = (req.query.name || (req.body && req.body.name));
    const responseMessage = name
        ? "Hello, " + name + ". This HTTP triggered function executed successfully."
        : "This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized r

    context.res = {
        // status: 200, /* Defaults to 200 */
        body: responseMessage
    };
}
```

```
10:53:57 AM dhiraj-2065687: Skipping build. Project type: Run-From-Zip
10:53:58 AM dhiraj-2065687: Skipping post build. Project type: Run-From-Zip
10:53:58 AM dhiraj-2065687: Triggering recycle (preview mode disabled).
10:53:58 AM dhiraj-2065687: Deployment successful.
10:54:19 AM dhiraj-2065687: Started postDeployTask "npm install (functions)".
10:54:30 AM dhiraj-2065687: Syncing triggers...
10:54:39 AM dhiraj-2065687: Querying triggers...
10:54:44 AM dhiraj-2065687: HTTP Trigger Urls:
  dhiraj-2065697: https://dhiraj-2065687.azurewebsites.net/api/dhiraj-2065697
```

ⓘ Deployment to "dhiraj-2065687" completed.

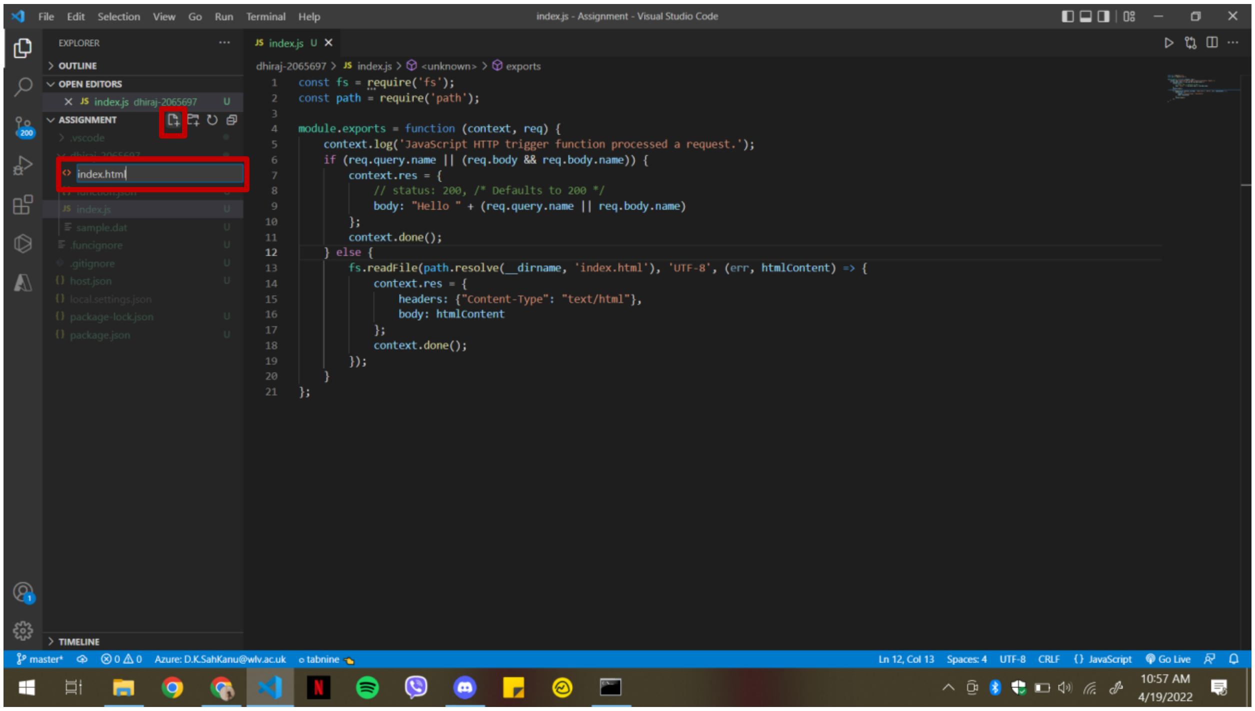
Source: Azure Function... Stream logs Upload settings View output

Step 16: When clicked on that URL, you will be redirected to this page which will show you 'This HTTP triggered function executed successfully.



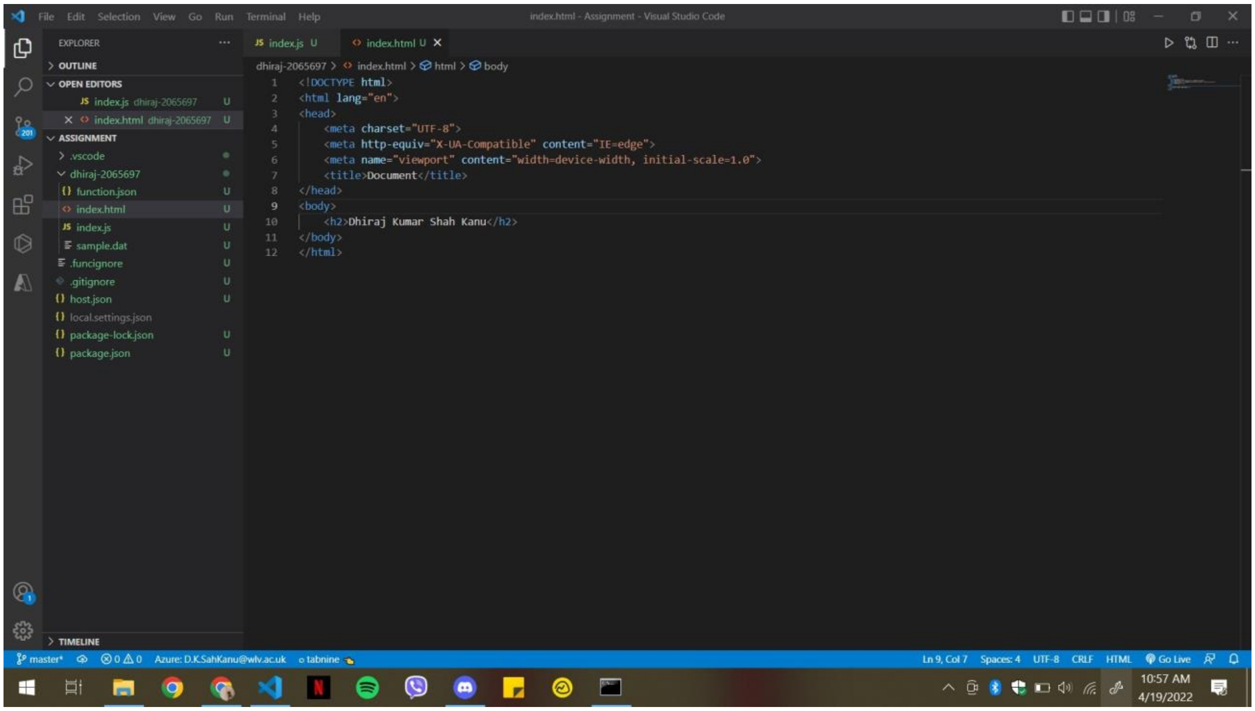
```
This HTTP triggered function executed successfully. Pass a name in the query string or in the request body for a personalized response.
```

Step 17: Now you need to click on new file and then create an index.html file.



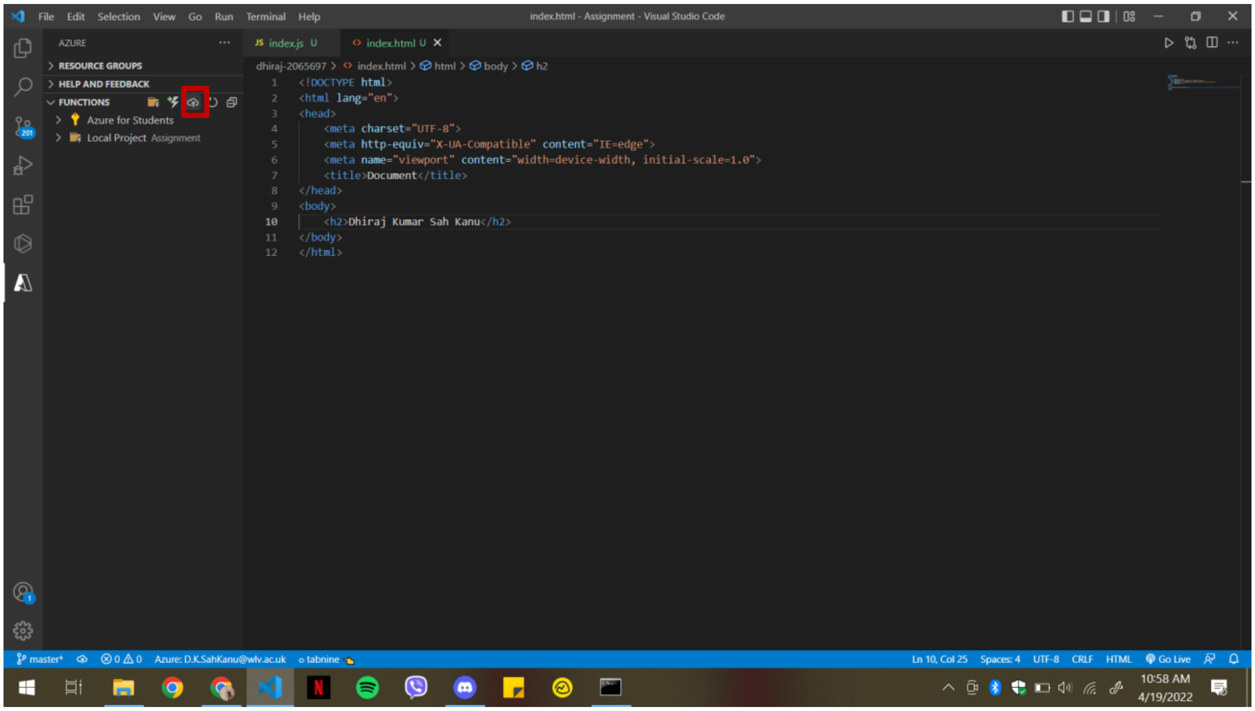
```
const fs = require('fs');
const path = require('path');

module.exports = function (context, req) {
    context.log('JavaScript HTTP trigger function processed a request.');
    if (req.query.name || (req.body && req.body.name)) {
        context.res = {
            // status: 200, /* Defaults to 200 */
            body: "Hello " + (req.query.name || req.body.name)
        };
        context.done();
    } else {
        fs.readFile(path.resolve(__dirname, 'index.html'), 'UTF-8', (err, htmlContent) => {
            context.res = {
                headers: {"Content-Type": "text/html"},
                body: htmlContent
            };
            context.done();
        });
    }
};
```

Step 18: Now simply create a html file using '!' and 'enter' this will provide you a body and simply add a text in h2 section.


index.html - Assignment - Visual Studio Code
EXPLORER
OUTLINE
OPEN EDITORS
index.js dhiraj-2065697 U
index.html dhiraj-2065697 U
ASSIGNMENT
.vscode
dhiraj-2065697
function.json
index.html
index.js
sample.dat
.funcignore
.gitignore
host.json
local.settings.json
package-lock.json
package.json
TIMELINE
dhiraj-2065697 > index.html > html > body
master* ⊗ 0 ⚠ 0 Azure: D.K.SahKanu@wlv.ac.uk tabnine
Ln 9, Col 7 Spaces: 4 UTF-8 CRLF HTML Go Live
10:57 AM 4/19/2022

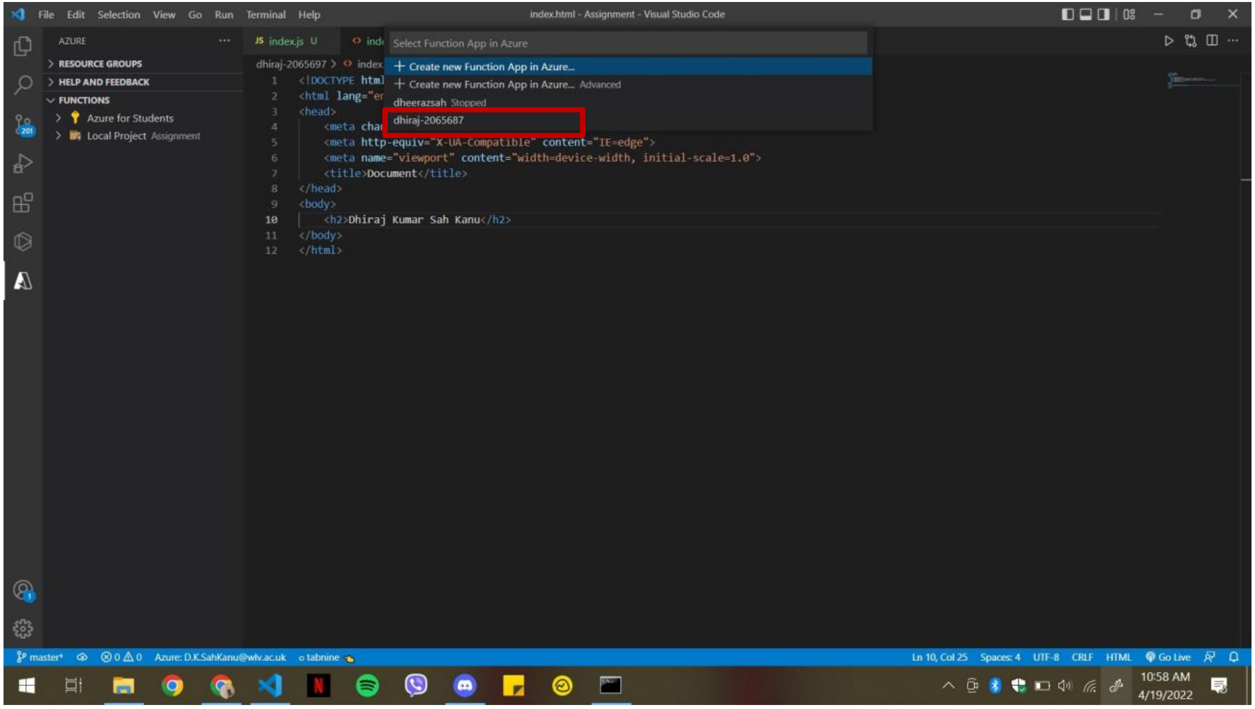
```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <h2>Dhiraj Kumar Shah Kanu</h2>
</body>
</html>
```

Step 19: Now, click on azure icon on the left navigation and re-deploy to function app by clicking on this upload icon.


index.html - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
dhiraj-2065697 > index.html > html > body > h2
master* ⊗ 0 ⚠ 0 Azure: D.K.SahKanu@wlv.ac.uk tabnine
Ln 10, Col 25 Spaces: 4 UTF-8 CRLF HTML Go Live
10:58 AM 4/19/2022

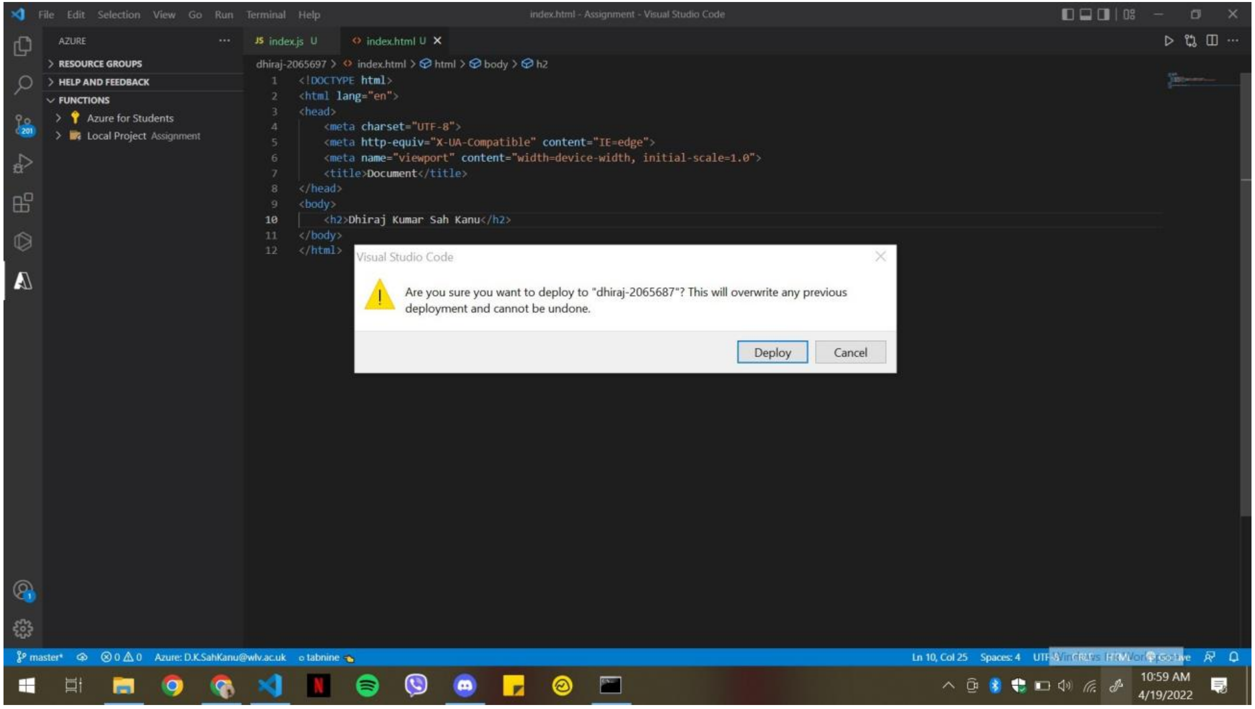
```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <h2>Dhiraj Kumar Sah Kanu</h2>
</body>
</html>
```

Step 20: Select the same function which you had created before. Here, I will be selecting my function.



index.html - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
Select Function App in Azure
+ Create new Function App in Azure...
+ Create new Function App in Azure... Advanced
dheerazsah Stopped
dhiraj-2065687

Step 21: You will be asked to deploy, click on deploy option.



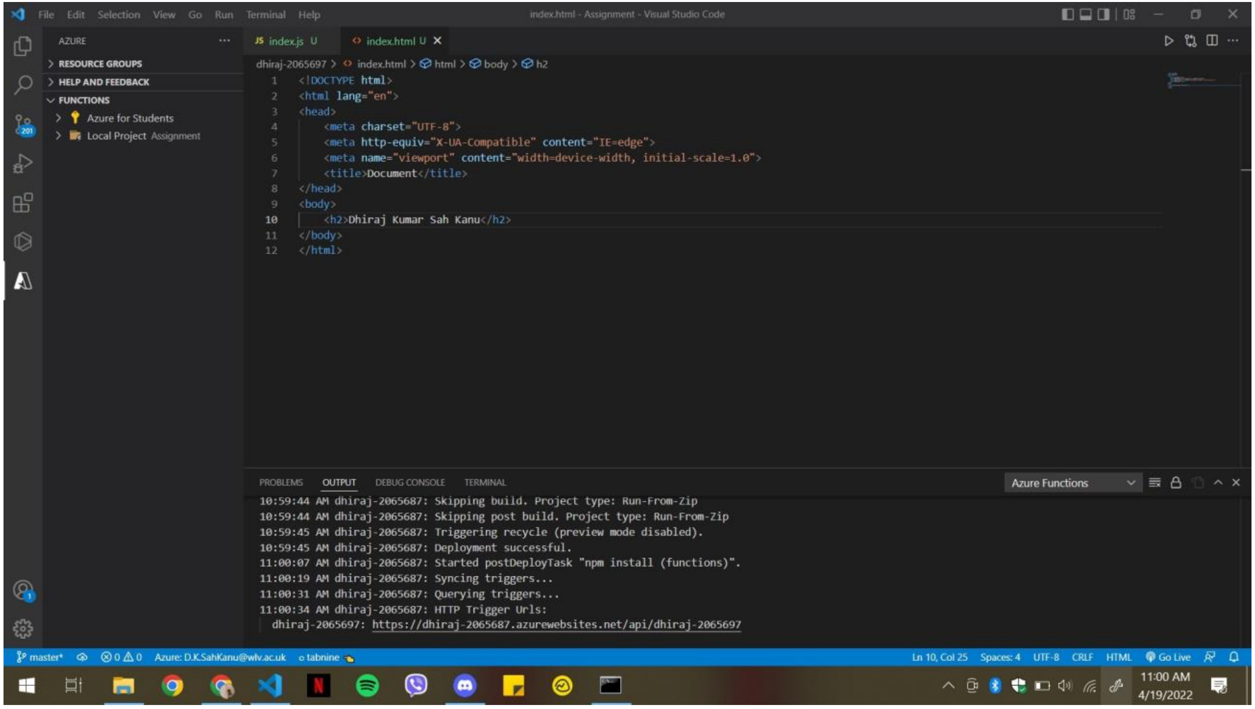
index.html - Assignment - Visual Studio Code
AZURE
RESOURCE GROUPS
HELP AND FEEDBACK
FUNCTIONS
Azure for Students
Local Project Assignment
dhiraj-2065697 > index.html > html > body > h2

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <h2>Dhiraj Kumar Sah Kanu</h2>
</body>
</html>
```

Visual Studio Code

Are you sure you want to deploy to "dhiraj-2065687"? This will overwrite any previous deployment and cannot be undone.

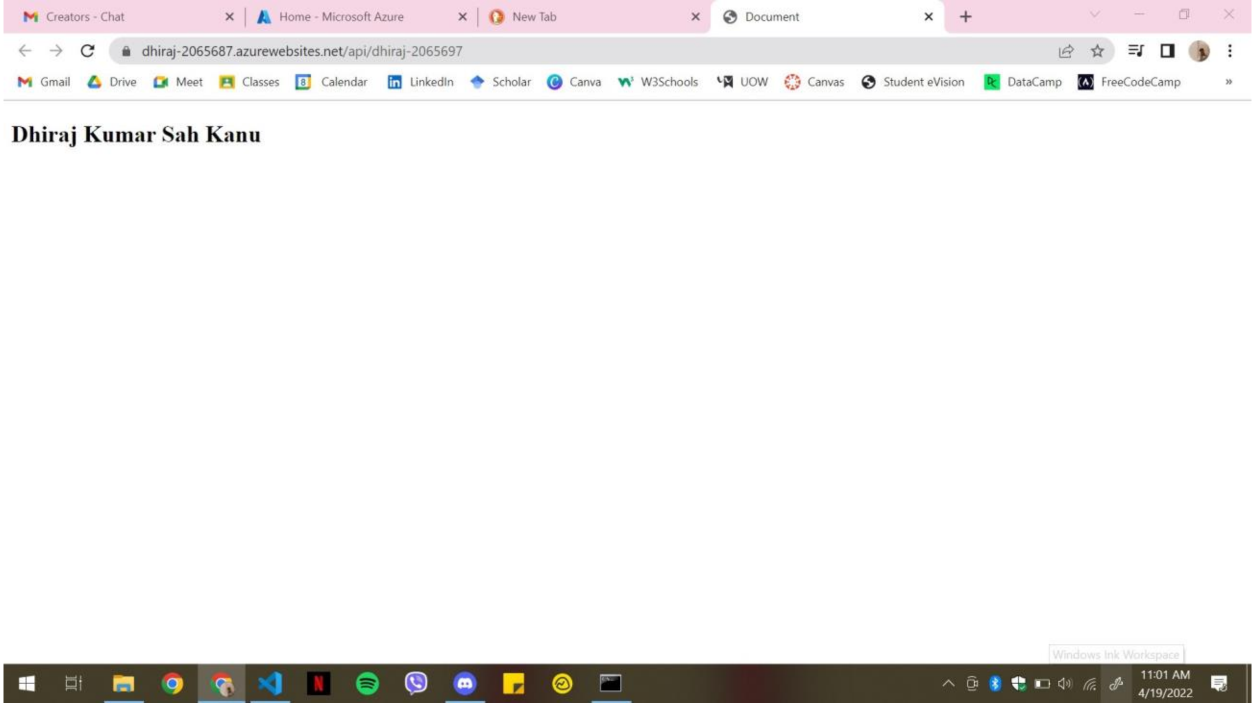
Step 22: An URL will be created in the output section. Click on the http URL.



```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <h2>Dhiraj Kumar Sah Kanu</h2>
</body>
</html>
```

```
10:59:44 AM dhiraj-2065687: Skipping build. Project type: Run-From-Zip
10:59:44 AM dhiraj-2065687: Skipping post build. Project type: Run-From-Zip
10:59:45 AM dhiraj-2065687: Triggering recycle (preview mode disabled).
10:59:45 AM dhiraj-2065687: Deployment successful.
11:00:07 AM dhiraj-2065687: Started postDeployTask "npm install (functions)".
11:00:19 AM dhiraj-2065687: Syncing triggers...
11:00:31 AM dhiraj-2065687: Querying triggers...
11:00:34 AM dhiraj-2065687: HTTP Trigger Urls:
  dhiraj-2065697: https://dhiraj-2065687.azurewebsites.net/api/dhiraj-2065697
```

Step 23: After following the link you will see your html file has been deployed.



dhiraj-2065687.azurewebsites.net/api/dhiraj-2065697

Dhiraj Kumar Sah Kanu