# Exercise - Write code to implement a web application

- 10 minutes

In this unit, you will use developer tools to create the Node.JS code for a starter web application.

Login to the Azure Portal and Open Azure Cloud Shell in-line

1. Open the Azure portal in a browser.

2. Sign into Azure using the Microsoft account email address and password you created for this session.

3. Click the **Cloud Shell** icon in the toolbar to launch the in-line Cloud Shell window

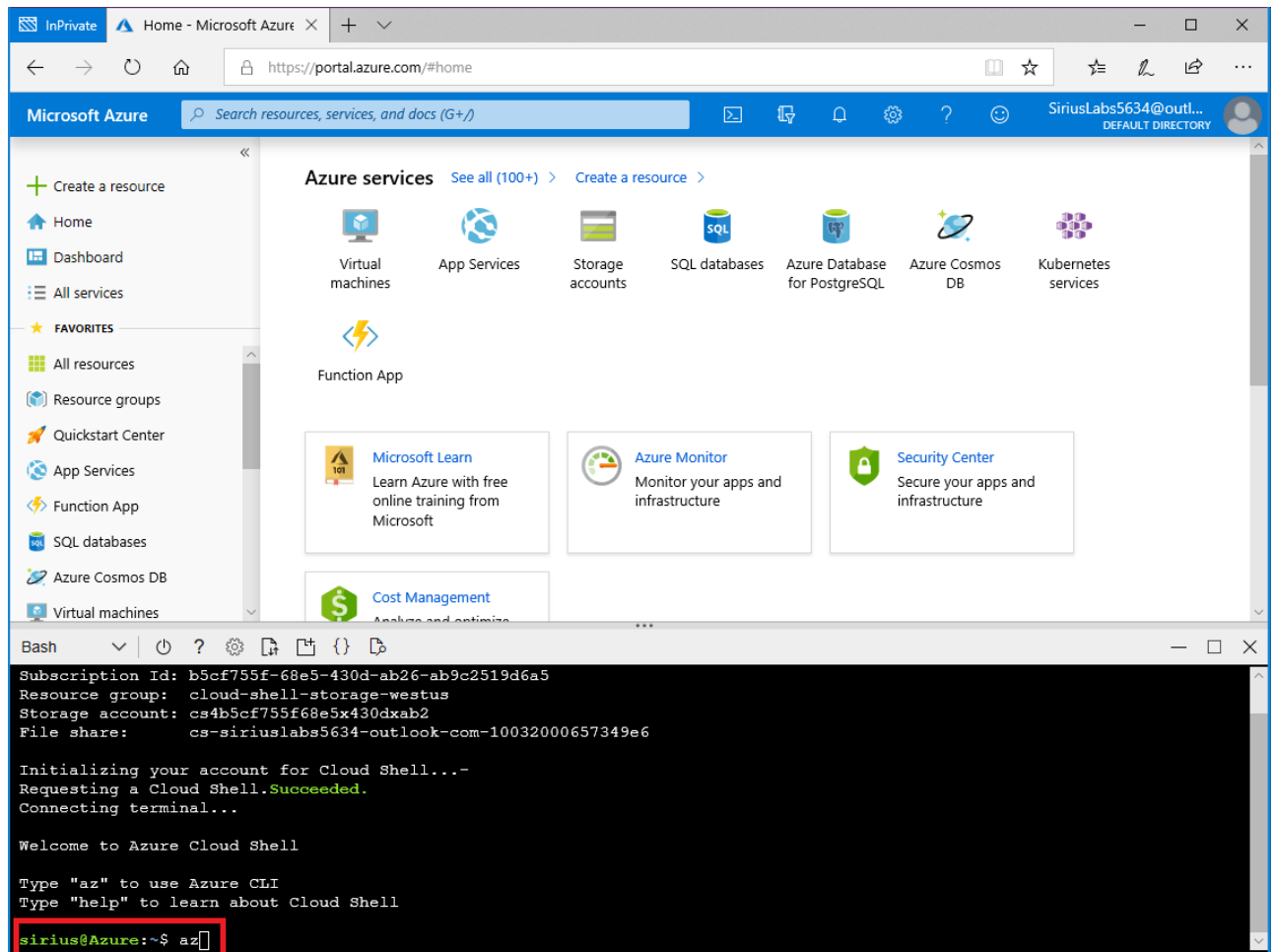4. If promoted, then click **Bash** in the window.
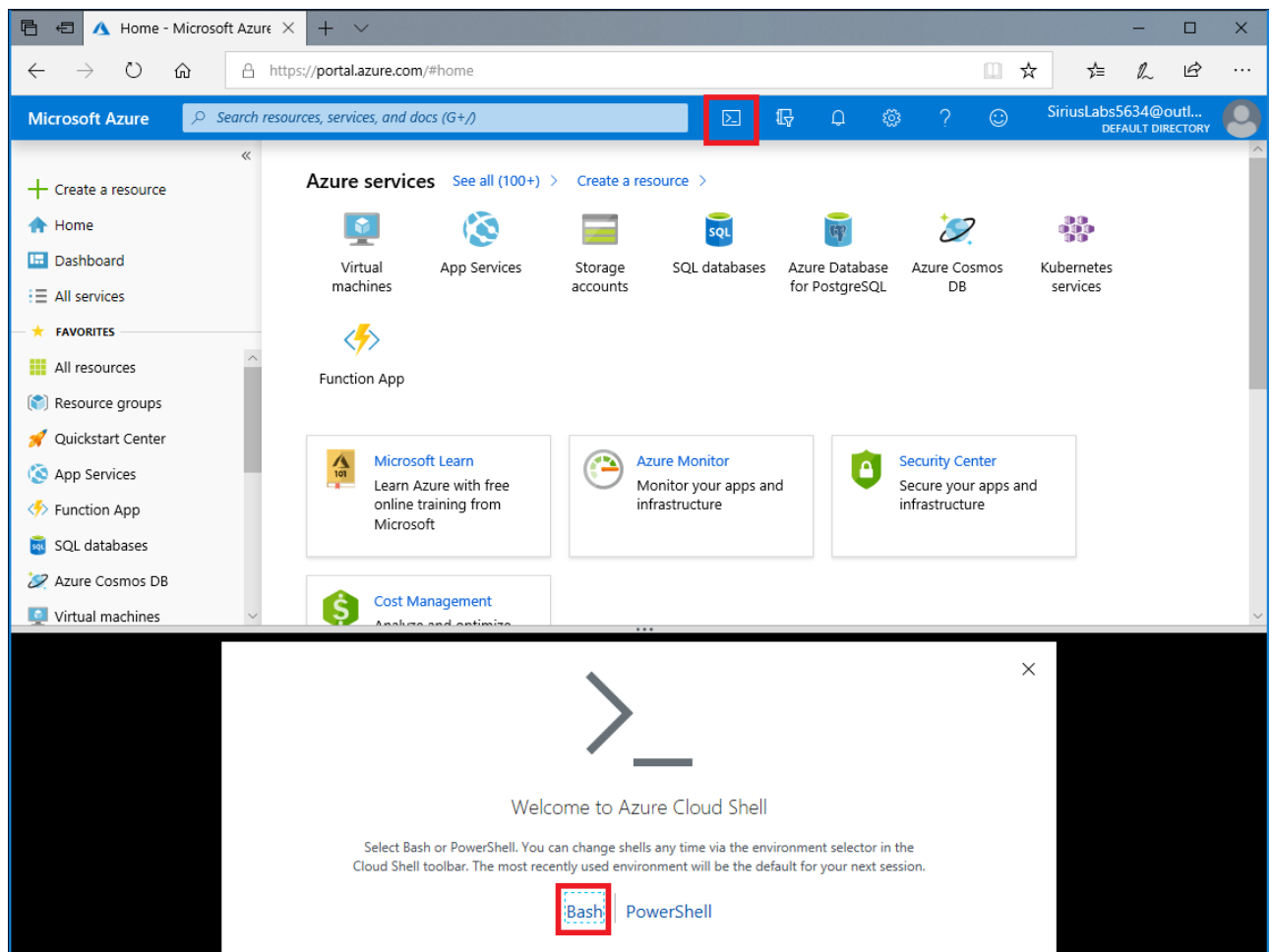
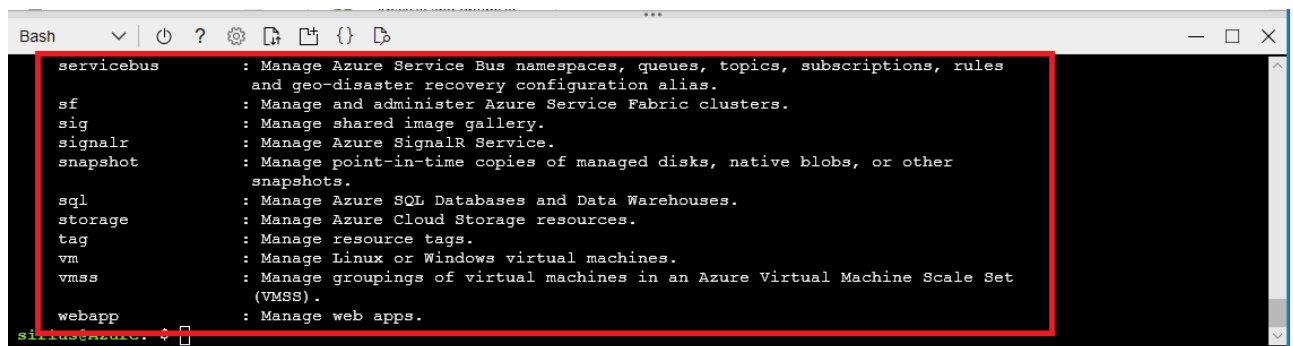5. If prompted, select your subscription, and click **Create storage**.
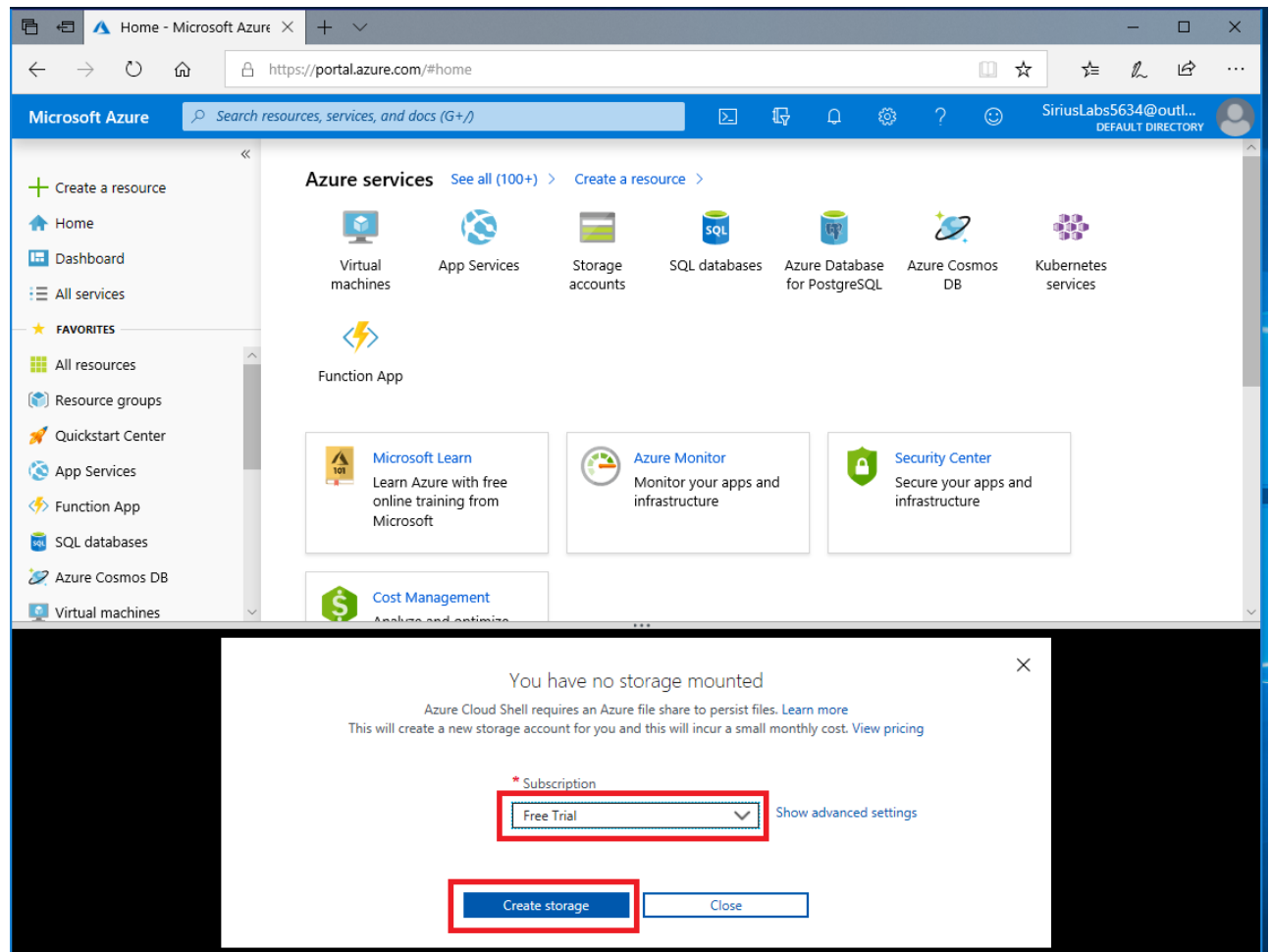
6. To start the Azure CLI, enter the following command and press Enter.

```
az
```

You should see something like the following list of available commands:

Create a new web project

To create a starter Node.js web application, we'll use Node Package Manager (npm) along with some basic JavaScript code to run the actual web page processing.

1. Run these commands in the Cloud Shell now to create a new `package.json` which will describe our Node.js application.

```
cd ~
mkdir helloworld
cd helloworld
npm init -y
```

This will create a new `package.json` file in the current folder - you should see it in the current folder if you type `ls` in the terminal window. We will need a JavaScript file to run our website logic - since this is just a basic example, we will only need one file - `index.js`.

2. Use the following command in the terminal to create the file:

```
touch index.js
```

Now we have to make a few edits to both of our files.

3. Type the following command into the terminal to open an interactive editor.

```
code .
```

4. Select the `package.json` file and make the following edits to the `scripts` section to use Node.js to launch the web app. You can also remove the `main` entry.

```
{
"name": "helloworld",
...
"scripts": {
    "start": "node index.js"
},
...
}
```

5. Save the file using ***Ctrl+S*** on Windows and Linux, ***Command+S*** on macOS.

   Important - Whenever you paste or change code into a file in the editor, make sure to save afterwards using the "..." menu, or the accelerator key (***Ctrl+S*** on Windows and Linux, ***Command+S*** on macOS).

6. Switch to the `index.js` file and add the following contents to it. This is a simple node program to always respond with "Hello World!" when any GET request is made to the server.

```
var http = require('http');

var server = http.createServer(function(request, response) {

    response.writeHead(200, { "Content-Type": "text/html" });
    response.end("<html><h1>Hello World!</h1></html>");

});

var port = process.env.PORT || 1337;
server.listen(port);
```

```
console.log("Server running at http://localhost:%d", port);
```

7. Save the file using **Ctrl+S** on Windows and Linux, or **Command+S** on macOS, and exit the editor. You can exit the editor through the "..." menu on the top right or through **Ctrl+Q**.

Congratulations! You just created the Node.JS code for a Web App, in the Azure Cloud Shell.