

**Cloud Computing**  
**Prof. Soumya Kanti Ghosh**  
**Department of Computer Science and Engineering**  
**Indian Institute of Technology, Kharagpur**

**Lecture - 18**  
**Demo**

Hi. So now, in continuation with our Demo on Azure; so we will be showing a live demo on as Azure system with a free login. So, the idea is as I mentioned that to; so, that you can also have a fill of a commercial cloud how it works etcetera. So, the application what we are going to demonstrate here and will be a very simple python web app the idea is that how you can develop your other this sort of for other apps in a in azure, right. So, with me Shubhabrata with be there.

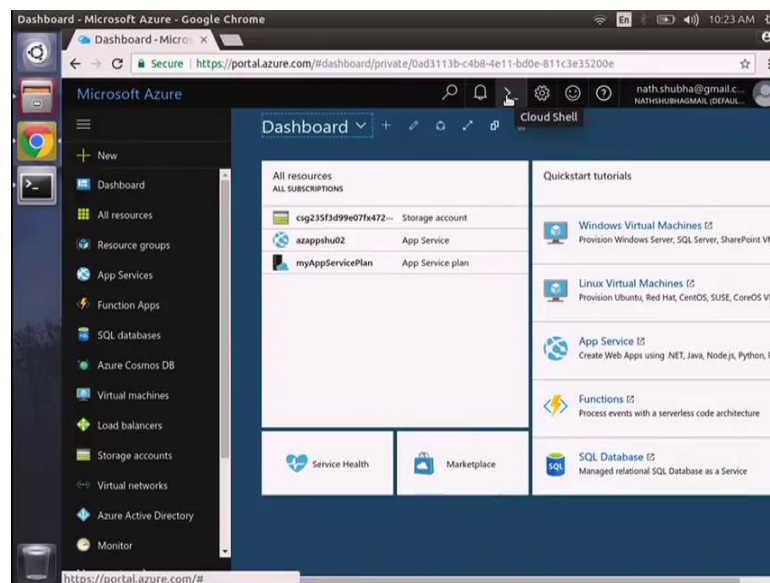
Hello.

Shubhabrata will be showing a live demo on the on a system. So, that you can follow the step though there are different variant of doing that, but this is one of the one of the standard step 1 of the standard procedure to look at the; to run any Azure app. So, I will give request Shubhabrata to start that.

Yes.

Demo show

(Refer Slide Time: 01:33)



Hello everyone, in this demo we are going to present the creation of a python web application in Microsoft Azure. Microsoft web applications are highly scalable self patching and it also provides us to develop our local application, the portal azure portal that is.

Portal.

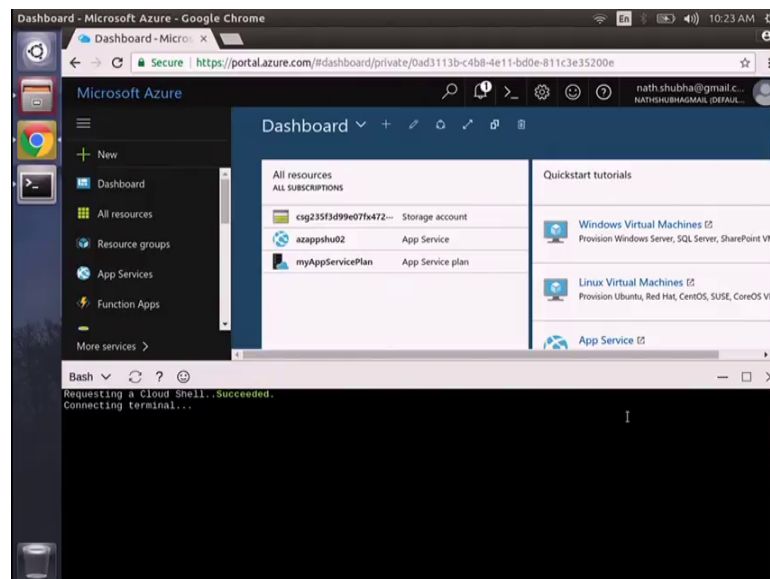
Portal dot azure dot com; so then we need to give our login credentials over here. So, here we need to give our user name and password, right.

So, Shubhabrata is have already having a login. So, he is using his own login otherwise you need to create it your own your; create your new login.

Right it is redirecting me to that Microsoft account sign in page; there I need to provide the password, right. So, now, we will be seeing the dashboard; all right, this is the dashboard for Microsoft azure. So, now, we need to launch a terminal that is azure terminal. So, that is this one the cloud shell.

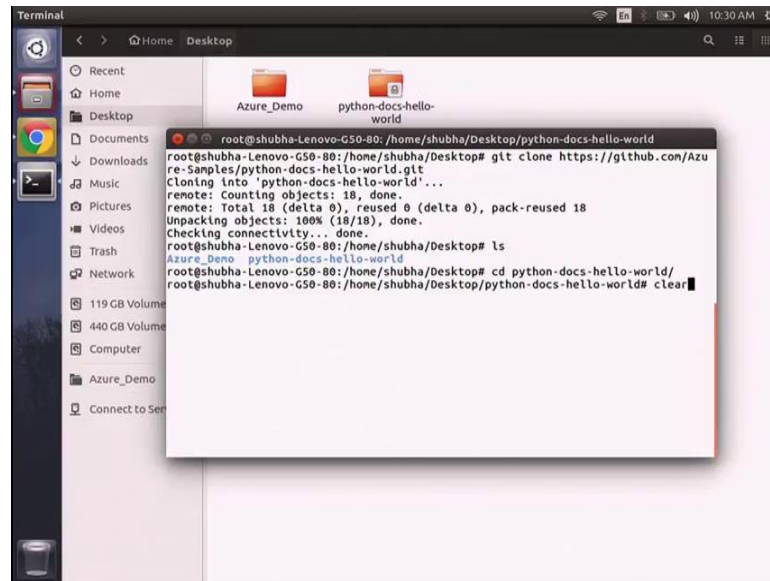
Cloud shell.

(Refer Slide Time: 03:51)



Right; so, that has been completed now it is connecting terminal, right. So, now, we need to do a local development of this python web application.

(Refer Slide Time: 04:12)

A screenshot of a Linux terminal window. The terminal shows the user cloning a repository from GitHub. The command used is `git clone https://github.com/Azure-Samples/python-docs-hello-world.git`. The output shows the cloning process, including counting and unpacking objects, and checking connectivity. The user then runs `ls` to list the contents of the cloned directory, showing `Azure_Demo` and `python-docs-hello-world`. Finally, the user runs `clear` to clear the terminal output.

```
root@shubha-Lenovo-G50-80: /home/shubha/Desktop/python-docs-hello-world
root@shubha-Lenovo-G50-80:/home/shubha/Desktop# git clone https://github.com/Azure-Samples/python-docs-hello-world.git
Cloning into 'python-docs-hello-world'...
remote: Counting objects: 18, done.
remote: Total 18 (delta 0), reused 0 (delta 0), pack-reused 18
Unpacking objects: 100% (18/18), done.
Checking connectivity... done.
root@shubha-Lenovo-G50-80:/home/shubha/Desktop# ls
Azure_Demo  python-docs-hello-world
root@shubha-Lenovo-G50-80:/home/shubha/Desktop# cd python-docs-hello-world/
root@shubha-Lenovo-G50-80:/home/shubha/Desktop/python-docs-hello-world# clear
```

So, for that I will be downloading a existing project from Git. So, the command for that is `git clone https://github.com/Azure-Samples/python-docs-hello-world.git`. So, here we have a demo for hello world.

Right; so, it is cloning the project directory into my local machine.

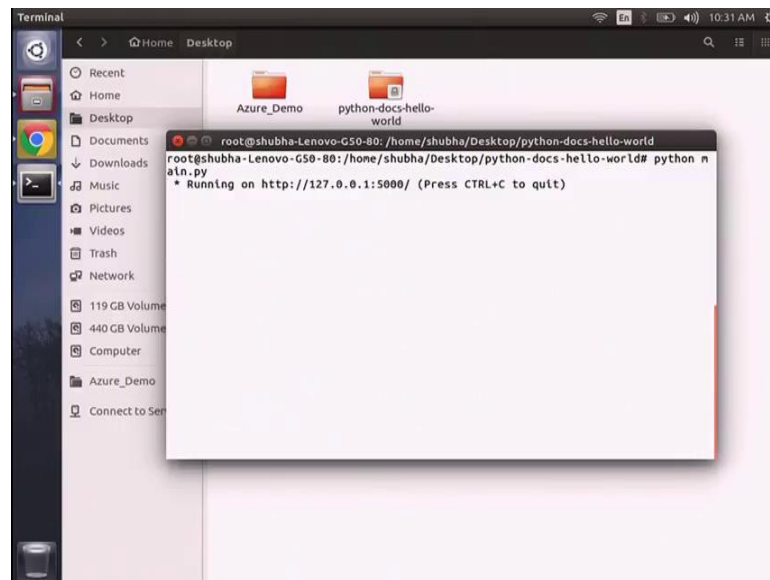
Need to revert it back.

Now, we need to go to that project folder. So, as you can see the project folder is this one, so `cd` right. So, here we have the contents. So, if I do `cat` of this main dot python file we can see.

Hello, World!

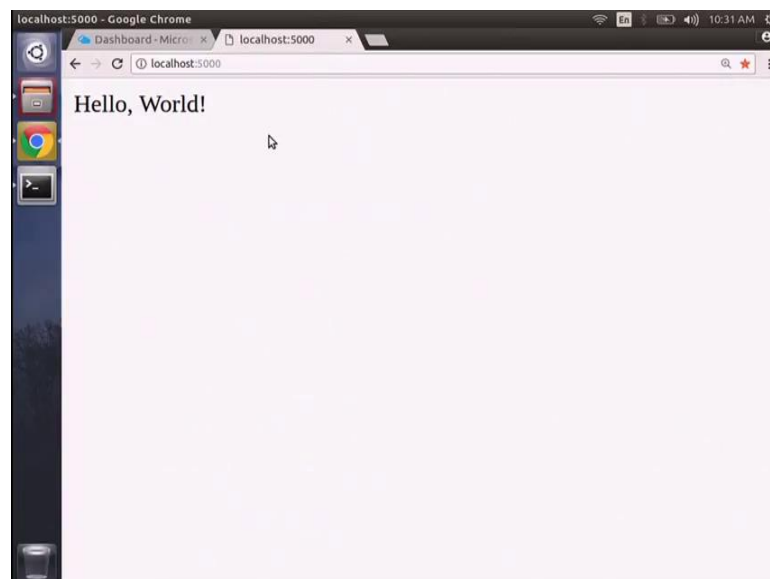
That hello world code has been written over here now in order to do this running of this in order to run this application we need flask; flask is a library which python uses and it provides us a framework that is microwave framework in python. So, I will be installing flask.

(Refer Slide Time: 06:03)



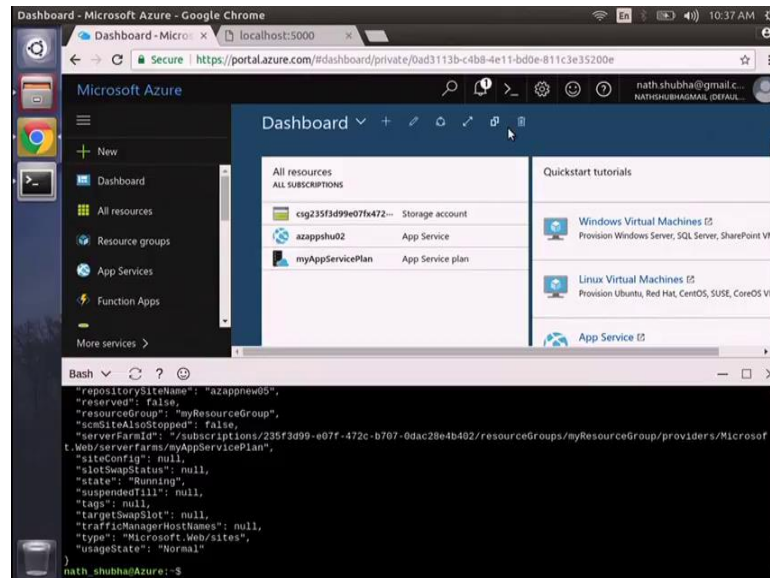
Now, I will be running this web application right in the browser I write localhost 5000.

(Refer Slide Time: 06:18)



So, it is showing me hello world, right. So, I will be pushing this project to our Microsoft as your, this portal so that we can host our local project in Microsoft azure.

(Refer Slide Time: 06:28)

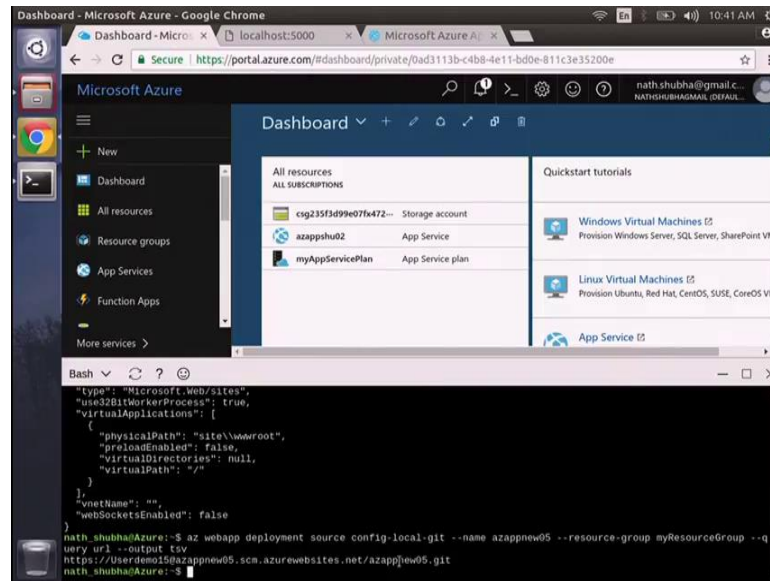


Now, in the Azure client we need to set a deployment user. So, this deployment user is required for FTP and local grid deployment to a web application. So, the command for this is a web app deployment user; set user name, I need to give; this will create a deployment, right. So, deployment user has been created with this user name and password. Now we recur a resource group. So, resource group is a logical container into which as your resource says like web applications data bases and storage accounts are deployed and managed. So, the command for that is az group create and your name for the resource group location, right. So, this will create a resource group resource group.

So, you been initiated a deployment user followed by a resource group. So, resource group is created.

Right; now we require an app service plan. So, an app service plan specifies the location app service plan specifies the location size and features of the web server that is that hosts our application, right. So, the command is az app service. This will create an app service plan, right. Now the web application generally provides a hosting space for our code and provides a url to view the deployed app. Now I will be creating an web application the command is az web app create name, right. So, now, if I go to the web browser and type the web app name followed by the dot azure websites dot net I will be able to view the webpage.

(Refer Slide Time: 10:02)

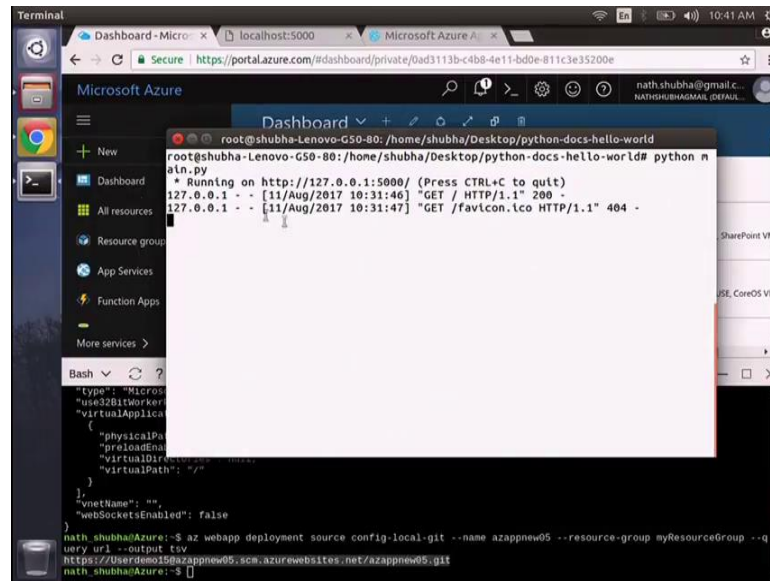


So, that now as this code is python based, we require we require to configure this as your; in order to use python. So, so I will be using a command this command will configure the corresponding python version with this web application. So, the command is az web app config space z python.

So, setting the python version this way uses the default container provided by this platform. Now we need to configure; configure local git deployment. So, this app service supports several ways to deploy content to a web app such as FTP local git; git hub, visual studio routine services etcetera for this demo we will be deploying using local git, Local git.

That means we will deploy by using the git command to push from our local repository to as your repository. So, the command is az web app deployment, right. So, we need to copy this URL and you need to go to terminal I need to open another terminal git remote add.

(Refer Slide Time: 11:38)

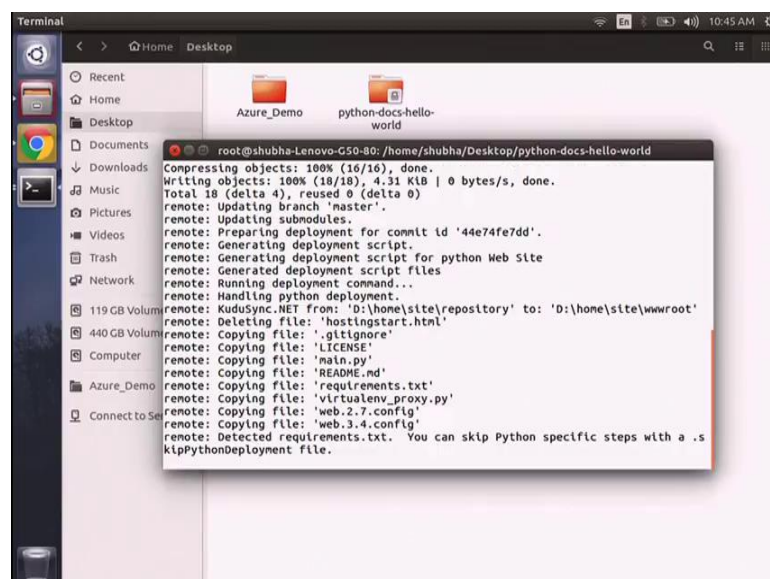


Azure. Azure. That URL.

That URL; for this we need to issue this command git, sorry, git push azure master, right. So, here it will prompt us to give a password. So, the password should be the password which we have given during the application of the deployment user, right. So, this command is asking for the corresponding password.

Password; so, that is we need to specify here up to we are going; now this will push to the azure remote to deploy our web application.

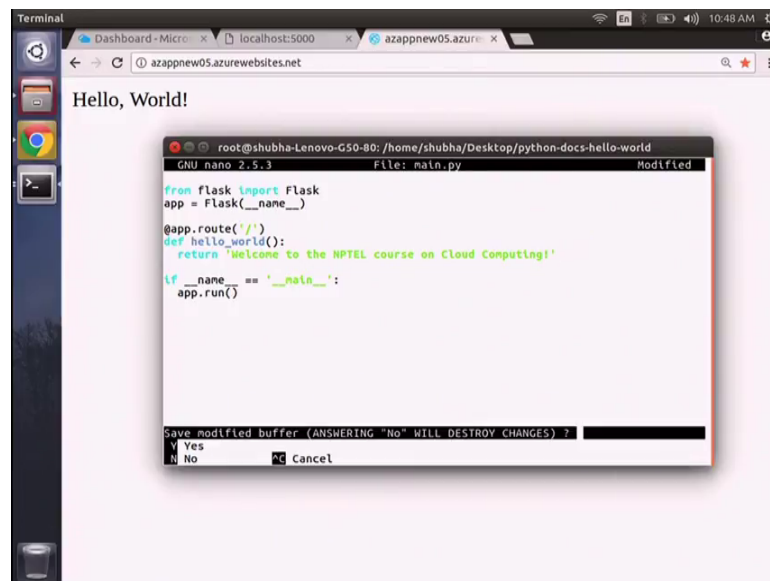
(Refer Slide Time: 13:07)



So, it will take some time. Then you recreate the application.

Right, so it has deployed successfully now we need to go to this for me that message hello world right, right. So, now, I will do a small change to our local project folder. So, I will open that main dot python file; we will do a change over here, I will change this message, let us say that is this one.

(Refer Slide Time: 14:48)



```
Terminal
Dashboard - Micro x localhost:5000 x azappnew05.azure x
azappnew05.azurewebsites.net
Hello, World!
root@shubha-Lenovo-G50-80: /home/shubha/Desktop/python-docs-hello-world
GNU nano 2.5.3 File: main.py Modified
from flask import Flask
app = Flask(__name__)

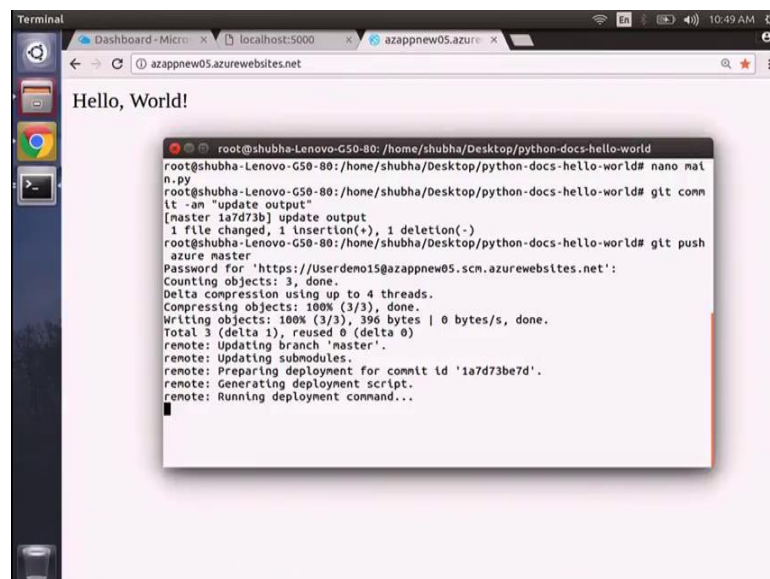
@app.route('/')
def hello_world():
    return 'Welcome to the NPTEL course on Cloud Computing!'

if __name__ == '__main__':
    app.run()

Save modified buffer (ANSWERING "No" WILL DESTROY CHANGES) ?
Y Yes
N No
AC Cancel
```

Welcome To the NPTEL Course on cloud computing, right, now we need to comment these changes in our git; so, for that I will use git commit. So, it has been able to update.

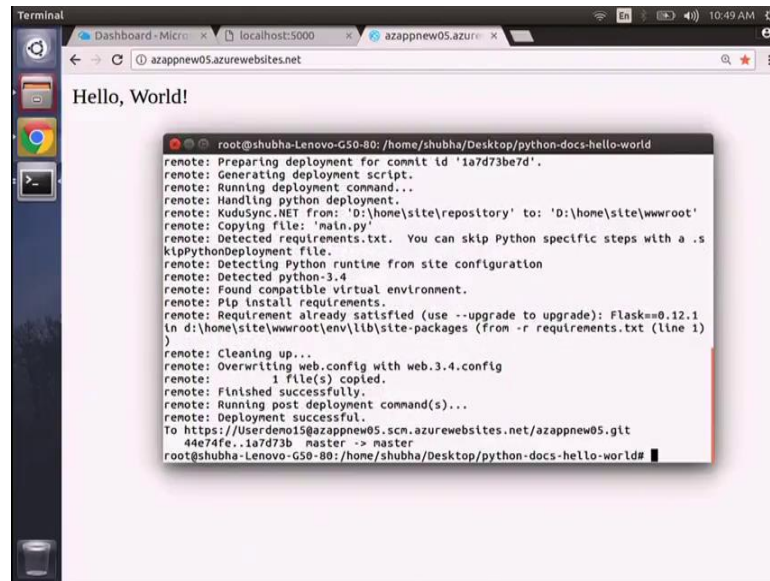
(Refer Slide Time: 15:27)



```
Terminal
Dashboard - Micro x localhost:5000 x azappnew05.azure x
azappnew05.azurewebsites.net
Hello, World!
root@shubha-Lenovo-G50-80: /home/shubha/Desktop/python-docs-hello-world
root@shubha-Lenovo-G50-80: /home/shubha/Desktop/python-docs-hello-world# nano main.py
root@shubha-Lenovo-G50-80: /home/shubha/Desktop/python-docs-hello-world# git commit -m "update output"
[master 1a7d73b] update output
1 file changed, 1 insertion(+), 1 deletion(-)
root@shubha-Lenovo-G50-80: /home/shubha/Desktop/python-docs-hello-world# git push azure master
Password for 'https://Userdemo15@azappnew05.scn.azurewebsites.net':
Counting objects: 3, done.
Delta compression using up to 4 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 396 bytes | 0 bytes/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Updating branch 'master'.
remote: Updating submodules.
remote: Preparing deployment for commit id '1a7d73be7d'.
remote: Generating deployment script.
remote: Running deployment command...
```

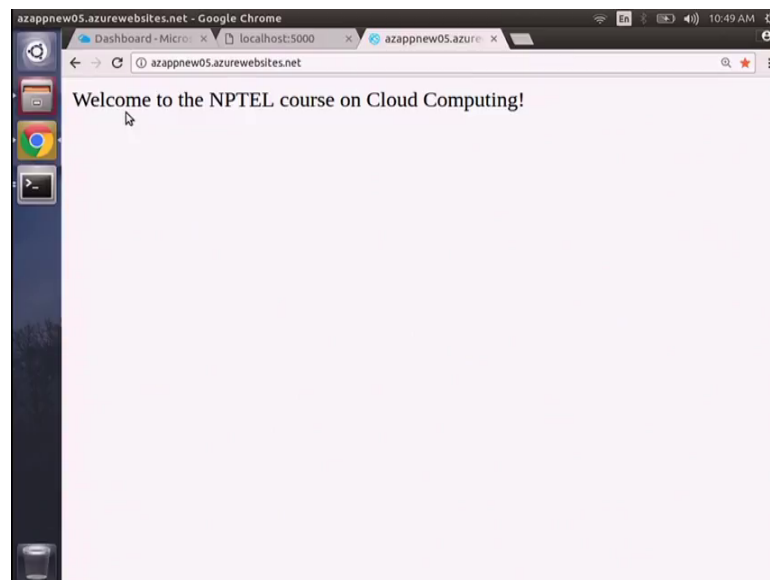


(Refer Slide Time: 16:24)



Now, you need to push the code changes to Microsoft azure, git push azure master, right, again I need to give the password of the deployment user. So, the app changes has been deployed successfully now we need to refresh this webpage.

(Refer Slide Time: 16:42)



So, this will give me the message welcome to NPTEL. Course on Cloud computing.

So, as we can see that what Shubhabrata has shown from that step by step procedure, he has used local git, right.

Yes.

For sinking with azure; so, you can develop your own web app in an host in those thing in azure, right. So, similarly you can develop other apps also. So, it is a again, it is just to give a feel of how a commercial cloud work and as you can see; this is sort of things any which any type of pass type of platform like azure; we will have somewhat similar characteristics, right.

So, with these let us end our discussion today on a commercial cloud than Microsoft azure. We will continue with other things in the next lecture.

Thank you.

Thank you.