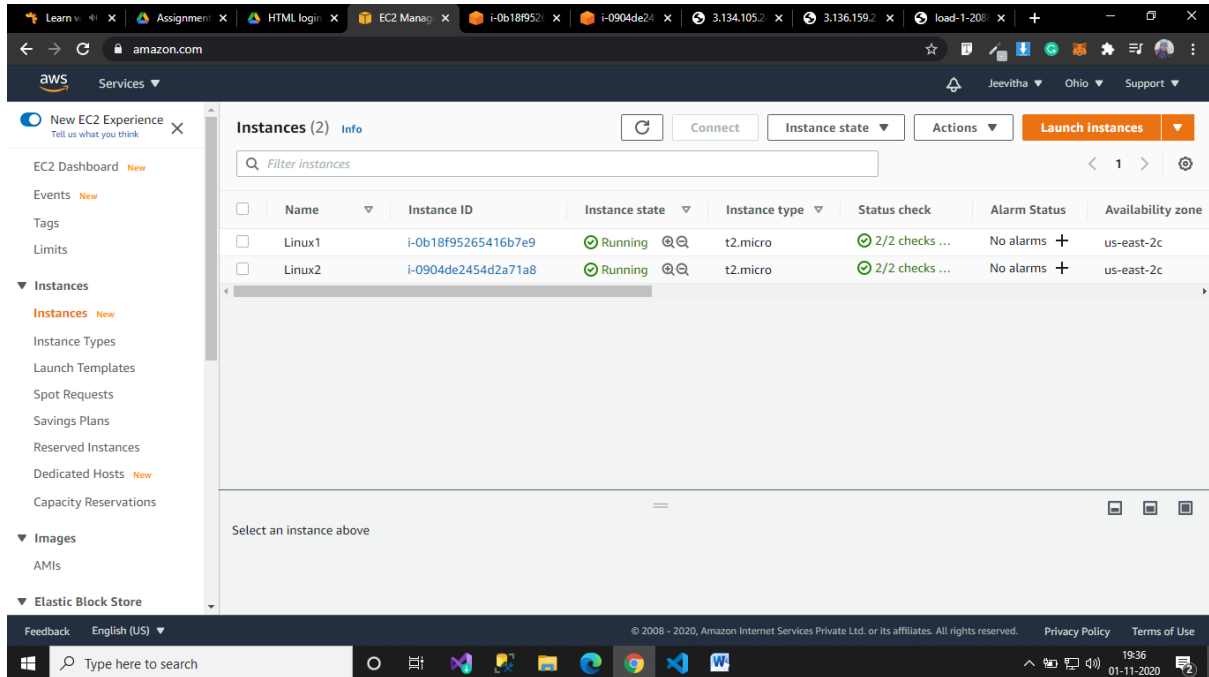


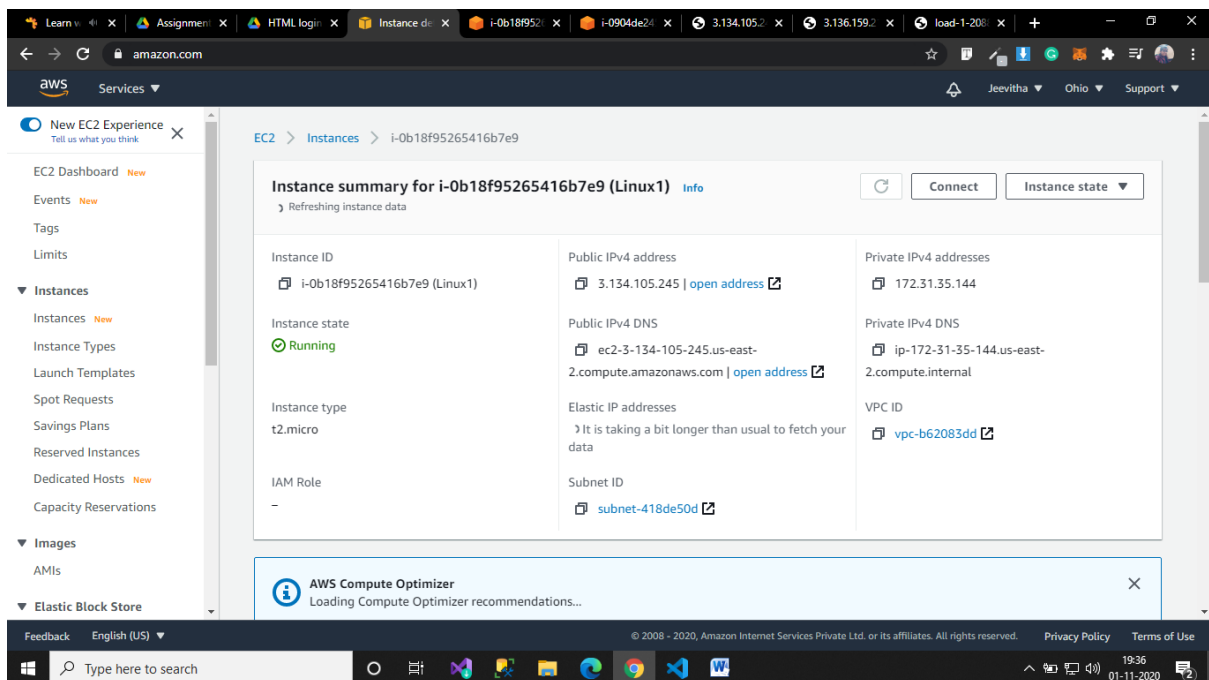
Project 1: Elastic Load Balancer

Step1: Create two linux instances, Use the first free linux AMI

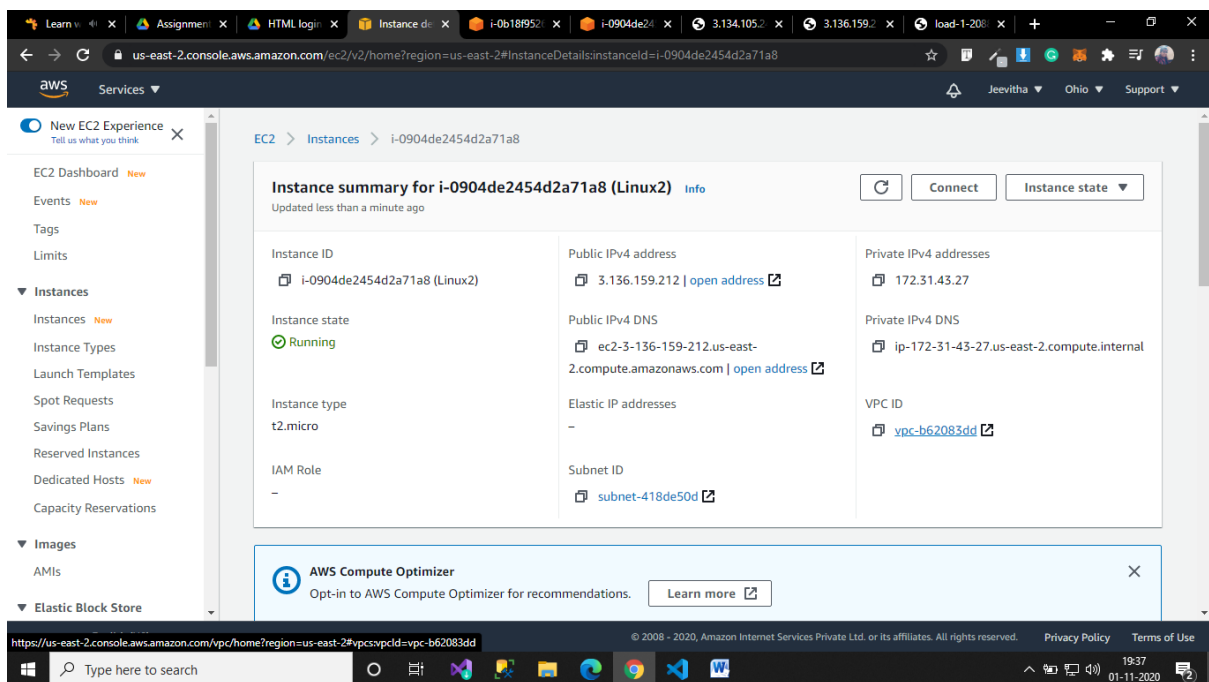
ss1: instances list



ss2: select an instance and display instance details of server1



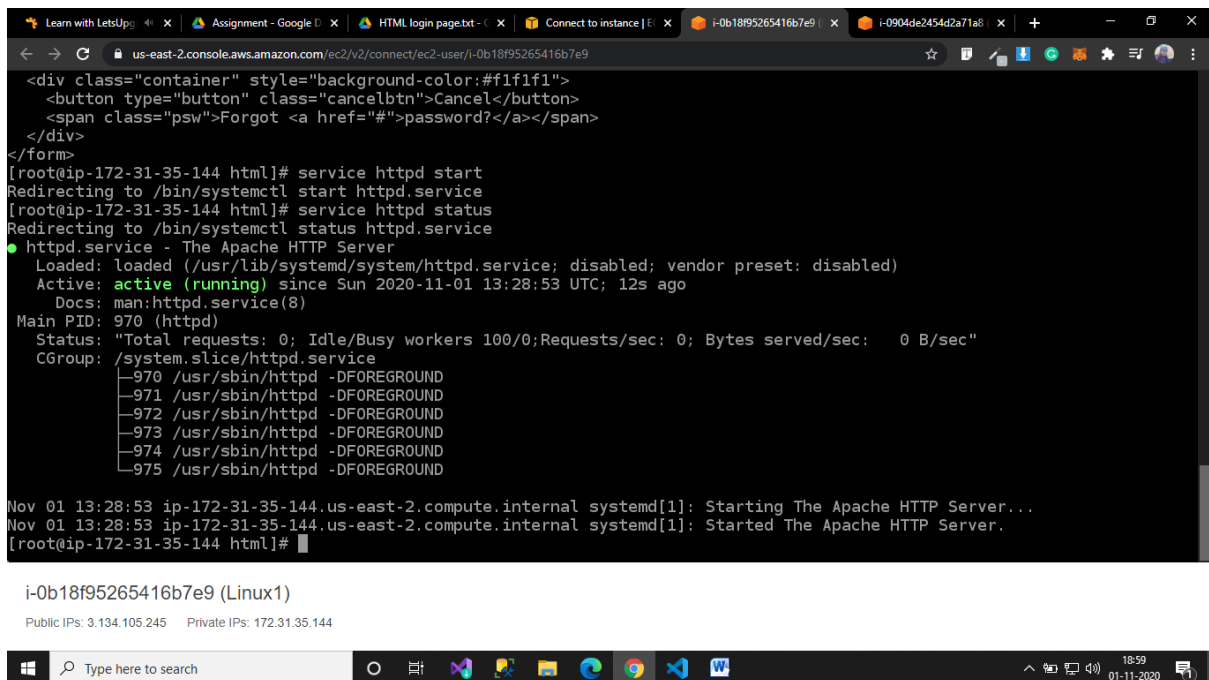
ss3:select a instance and display instance details of server2



Step2:Launch both instances using Mobaxterm

Step3:Host html login webpage on both servers

ss4:Status:Active running- black screen



```
us-east-2.console.aws.amazon.com/ec2/v2/connect/ec2-user/i-0904de2454d2a71a8

<div class="container" style="background-color:#f1f1f1">
  <button type="button" class="cancelbtn">Cancel</button>
  <span class="psw">Forgot <a href="#">password?</a></span>
</div>
</form>
[root@ip-172-31-43-27 html]# service httpd start
Redirecting to /bin/systemctl start httpd.service
[root@ip-172-31-43-27 html]# service httpd status
Redirecting to /bin/systemctl status httpd.service
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2020-11-01 13:22:06 UTC; 17s ago
     Docs: man:httpd.service(8)
   Main PID: 13012 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
   CGroup: /system.slice/httpd.service
           └─13012 /usr/sbin/httpd -DFOREGROUND
             └─13044 /usr/sbin/httpd -DFOREGROUND
               └─13045 /usr/sbin/httpd -DFOREGROUND
                 └─13046 /usr/sbin/httpd -DFOREGROUND
                   └─13047 /usr/sbin/httpd -DFOREGROUND
                     └─13048 /usr/sbin/httpd -DFOREGROUND

Nov 01 13:22:06 ip-172-31-43-27.us-east-2.compute.internal systemd[1]: Starting The Apache HTTP Server...
Nov 01 13:22:06 ip-172-31-43-27.us-east-2.compute.internal systemd[1]: Started The Apache HTTP Server.
[root@ip-172-31-43-27 html]#
```

i-0904de2454d2a71a8 (Linux2)

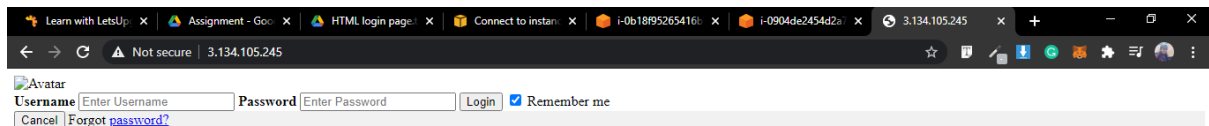
Public IPs: 3.136.159.212 Private IPs: 172.31.43.27



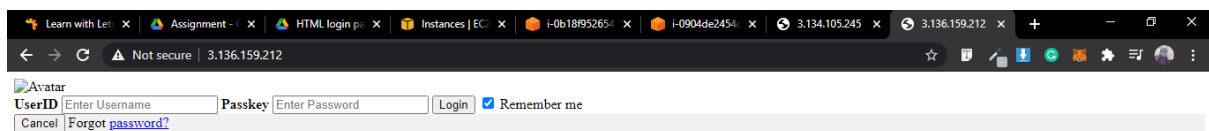
Step4:Check if application is deployed on both servers by copy pasting the public ip of the

servers into the browser.

ss5:username password page

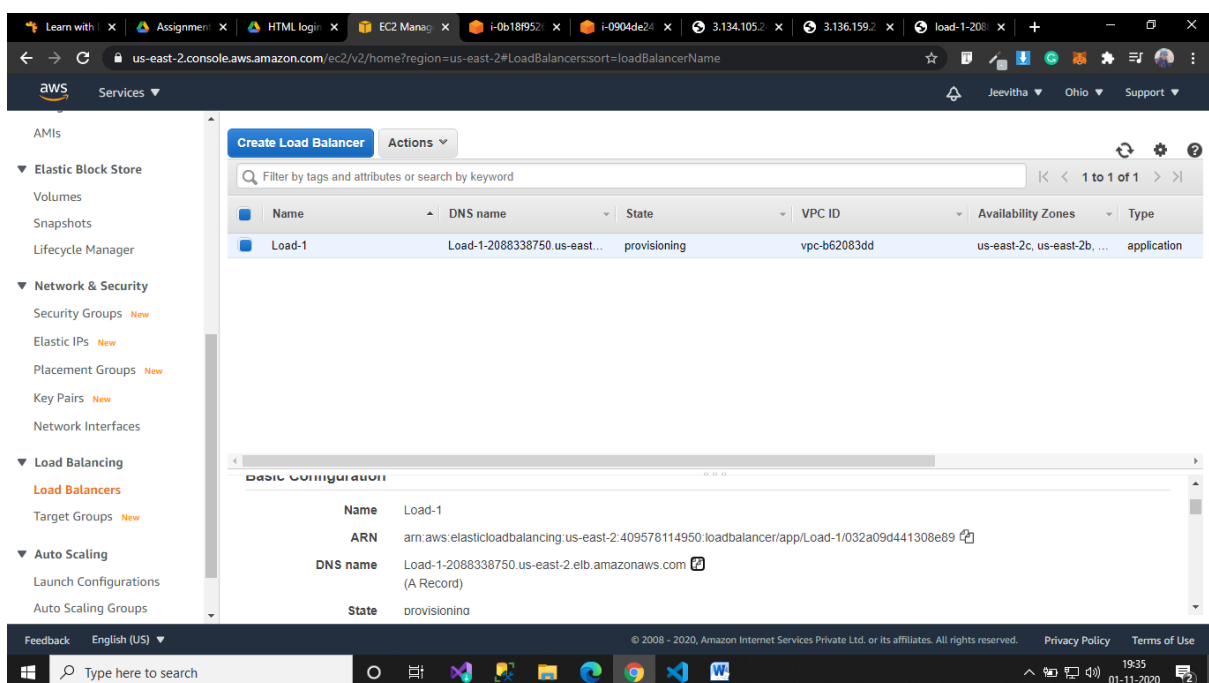


ss6:userid passkey



Step5:Create a application Load balancer with the above two instances as targets

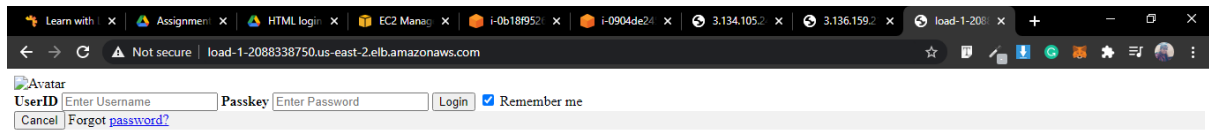
ss7:Load balancer screenshot



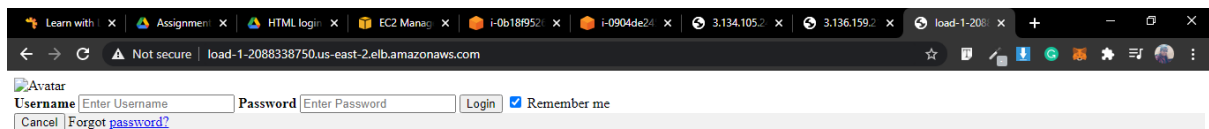
Step6:Check the functioning of ELB using the DNS of the ELB

use the dns

ss8:reply from server1



ss9:reply from server2



Project 2: Creating a User Pool in AWS Cognito

Step 1: Creating a User Pool

Step 2: Create Name and select Step through settings.

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console.aws.amazon.com

aws Services

User Pools | Federated Identities

Create a user pool

Cancel

Name

Attributes
Policies
MFA and verifications
Message customizations
Tags
Devices
App clients
Triggers
Review

What do you want to name your user pool?

Give your user pool a descriptive name so you can easily identify it in the future.

Pool name

MyPool

How do you want to create your user pool?

Review defaults
Start by reviewing the defaults and then customize as desired

Step through settings
Step through each setting to make your choices

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Type here to search

Step 3: Click on Email or Phone number to sign in or up. And select required attributes.

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console.aws.amazon.com

aws Services

User Pools | Federated Identities

Create a user pool

Cancel

Attributes

MFA and verifications
Message customizations
Tags
Devices
App clients
Triggers
Review

You can't change the sign-in and attribute options on this page after you've created your user pool. Make sure that you've decided on the settings that you want.

How do you want your end users to sign in?

You can choose to have users sign in with an email address, phone number, username or preferred username plus their password. [Learn more.](#)

☐ Username - Users can use a username and optionally multiple alternatives to sign up and sign in.

☐ Also allow sign in with verified email address.

☐ Also allow sign in with verified phone number.

☐ Also allow sign in with preferred username (a username that your users can change)

☒ Email address or phone number - Users can use an email address or phone number as their "username" to sign up and sign in.

☒ Allow email addresses

☐ Allow phone numbers

☐ Allow both email addresses and phone numbers (users can choose one)

You can choose to enable case insensitivity on the username input for the selected sign-in option. For example, when this option is selected, the users can sign in using either "username" or "Username".

☒ (Recommended) Enable case insensitivity for username input

Which standard attributes do you want to require?

All of the standard attributes can be used for user profiles, but the attributes you select will be required for sign up. You will not be able to change these requirements after the pool is created. If you select an attribute to be an alias, users will be able to sign-in using that value or their username. [Learn more about attributes.](#)

Required	Attribute	Required	Attribute
<input checked="" type="checkbox"/>	address	<input type="checkbox"/>	nickname
<input type="checkbox"/>	birthdate	<input checked="" type="checkbox"/>	phone number
<input checked="" type="checkbox"/>	email	<input type="checkbox"/>	picture
<input type="checkbox"/>	family name	<input type="checkbox"/>	preferred username
<input checked="" type="checkbox"/>	gender	<input checked="" type="checkbox"/>	profile
<input type="checkbox"/>	given name	<input type="checkbox"/>	zoneinfo
<input type="checkbox"/>	locale	<input type="checkbox"/>	updated at
<input checked="" type="checkbox"/>	middle name	<input type="checkbox"/>	website
<input type="checkbox"/>	name		

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Type here to search

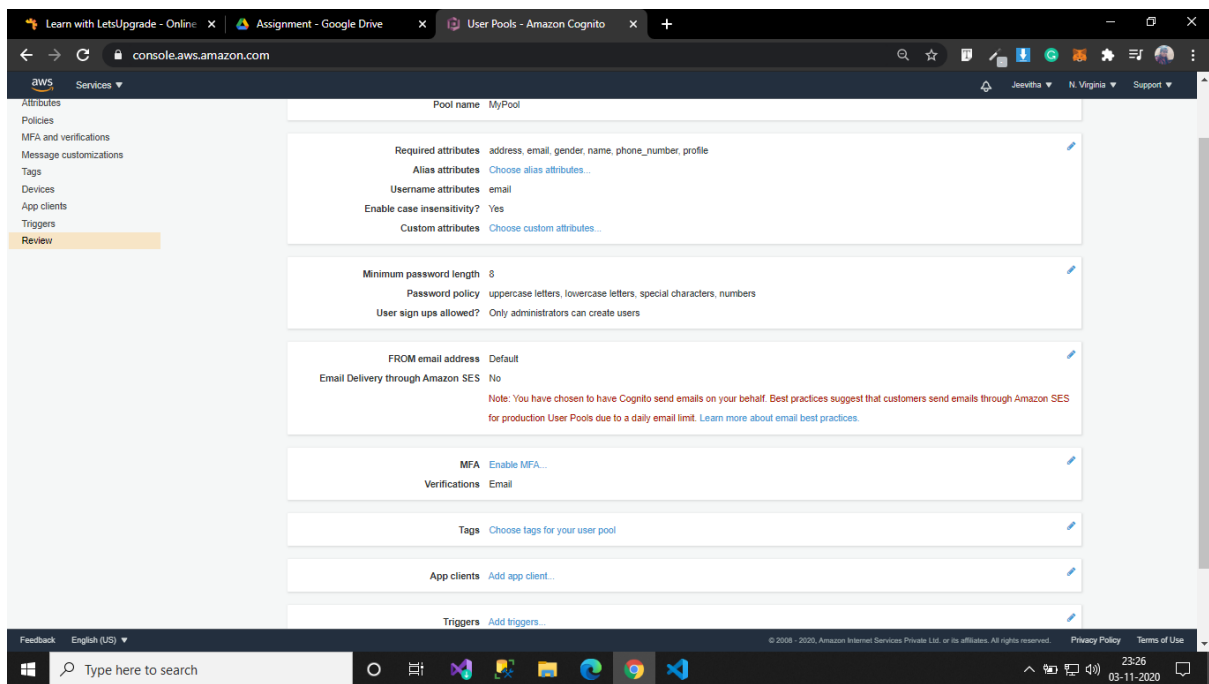
Step 4: choose to only allow administrators to create users or allow users to sign themselves up.

The screenshot shows the 'Create a user pool' page in the AWS IAM console, specifically the 'Policies' tab. The page is titled 'What password strength do you want to require?'. It includes a sidebar with navigation links: Name, Attributes, Policies (selected), MFA and verifications, Message customizations, Tags, Devices, App clients, Triggers, and Review. The main content area has three sections: 1. 'What password strength do you want to require?' with a 'Minimum length' input set to 8 and three checked checkboxes: 'Require numbers', 'Require special character', and 'Require uppercase letters'. 2. 'Do you want to allow users to sign themselves up?' with two radio buttons: 'Only allow administrators to create users' (selected) and 'Allow users to sign themselves up'. 3. 'How quickly should temporary passwords set by administrators expire if not used?' with a 'Days to expire' input set to 7. At the bottom are 'Back' and 'Next step' buttons.

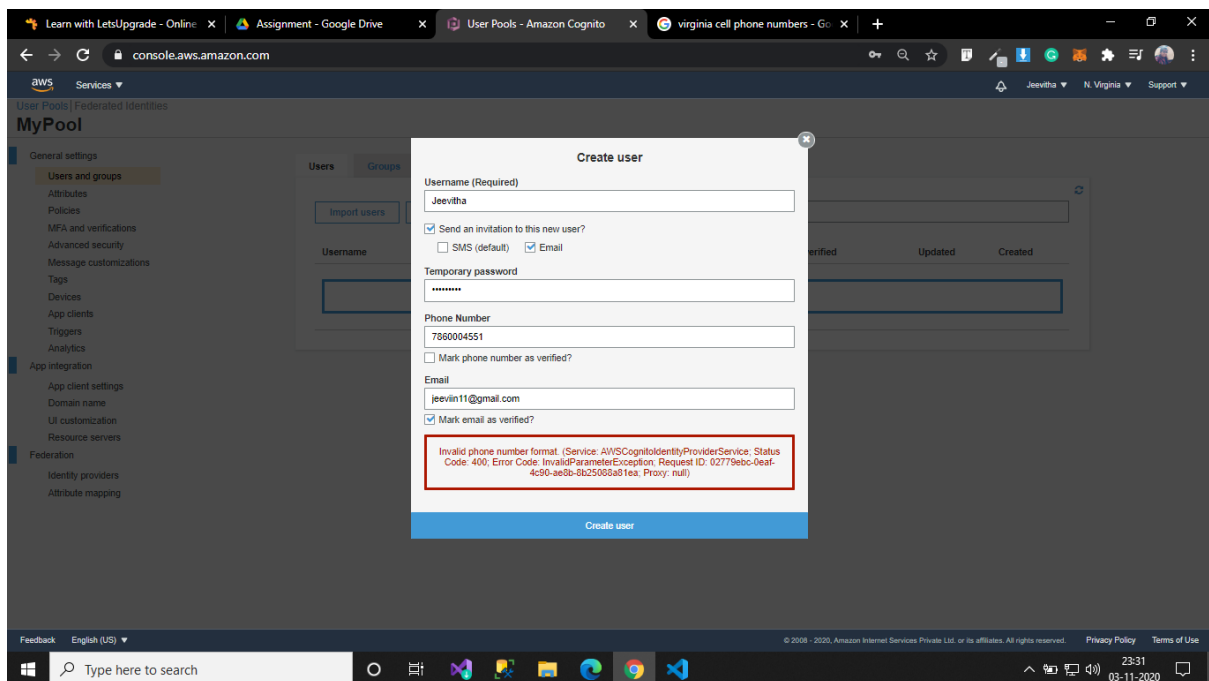
Step 5: for verification choose Email only.

The screenshot shows the 'Create a user pool' page in the AWS IAM console, specifically the 'MFA and verifications' tab. The page is titled 'Do you want to enable Multi-Factor Authentication (MFA)?'. It includes the same sidebar as the previous screenshot. The main content area has three sections: 1. 'Do you want to enable Multi-Factor Authentication (MFA)?' with a note about separate charges for text messages and three radio buttons: 'Off' (selected), 'Optional', and 'Required'. 2. 'How will a user be able to recover their account?' with a note about password resets and five radio buttons: 'Email if available, otherwise phone, but don't allow a user to reset their password via phone if they are also using it for MFA' (selected), 'Phone if available, otherwise email, but don't allow a user to reset their password via phone if they are also using it for MFA', 'Email only', 'Phone only, but don't allow a user to reset their password via phone if they are also using it for MFA', and '(Not Recommended) Phone if available, otherwise email, and do allow a user to reset their password via phone if they are also using it for MFA'. 3. 'Which attributes do you want to verify?' with a note about verification requirements and four radio buttons: 'Email' (selected), 'Phone number', 'Email or phone number', and 'No verification'. At the bottom, there is a section 'You must provide a role to allow Amazon Cognito to send SMS messages' with a 'New role name' input field containing 'MyPool-SMS-Role'.

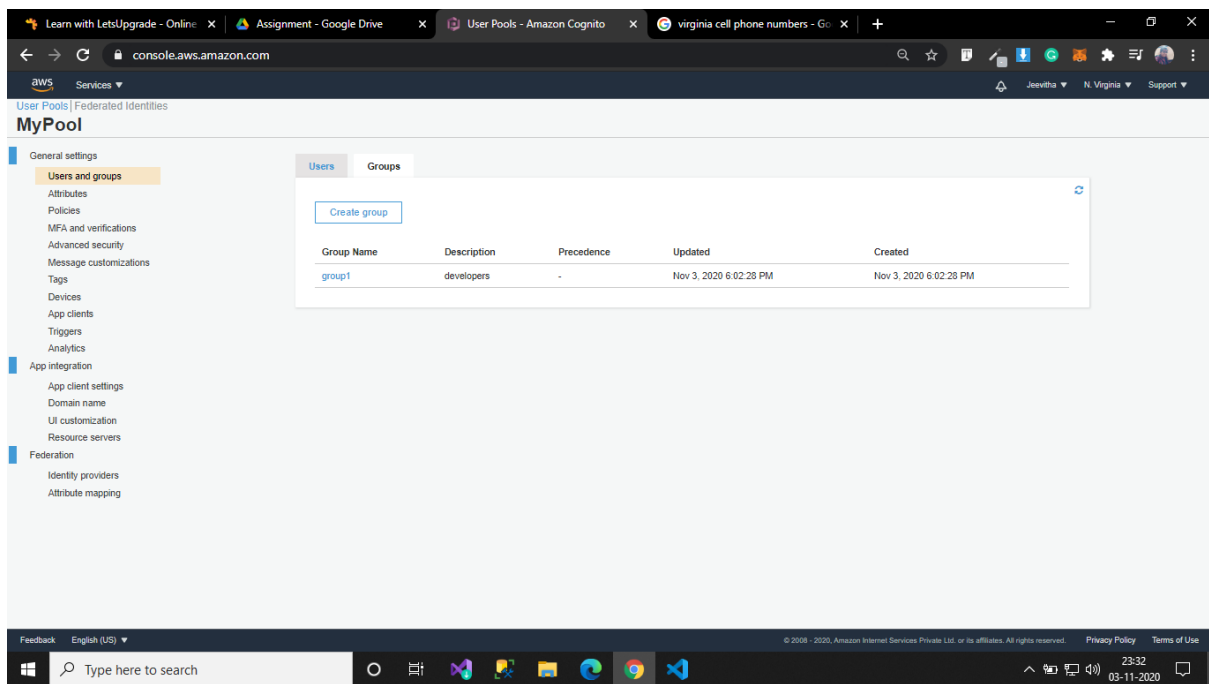
Step 6: other steps leave as it is. Click to review then create.



step 7: Create users.



Step 8: create Groups.



The screenshot shows the AWS IAM console interface for a user pool named 'MyPool'. The 'Groups' tab is selected, displaying a 'Create group' button and a table of existing groups.

Group Name	Description	Precedence	Updated	Created
group1	developers	-	Nov 3, 2020 6:02:28 PM	Nov 3, 2020 6:02:28 PM

The interface includes a left-hand navigation menu with categories like 'General settings', 'App integration', and 'Federation'. The top of the browser window shows multiple open tabs, including 'Learn with LetsUpgrade - Online...', 'Assignment - Google Drive', 'User Pools - Amazon Cognito', and 'virginia cell phone numbers - Google...'. The bottom of the screen shows the Windows taskbar with a search bar and various application icons.