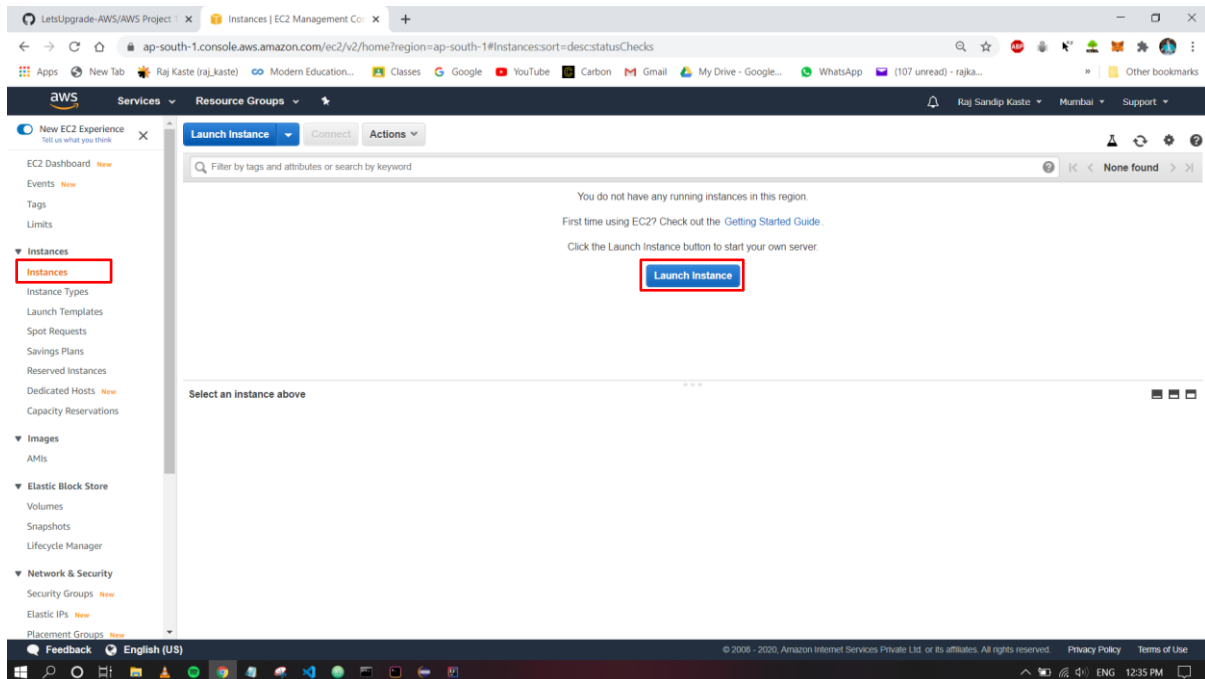


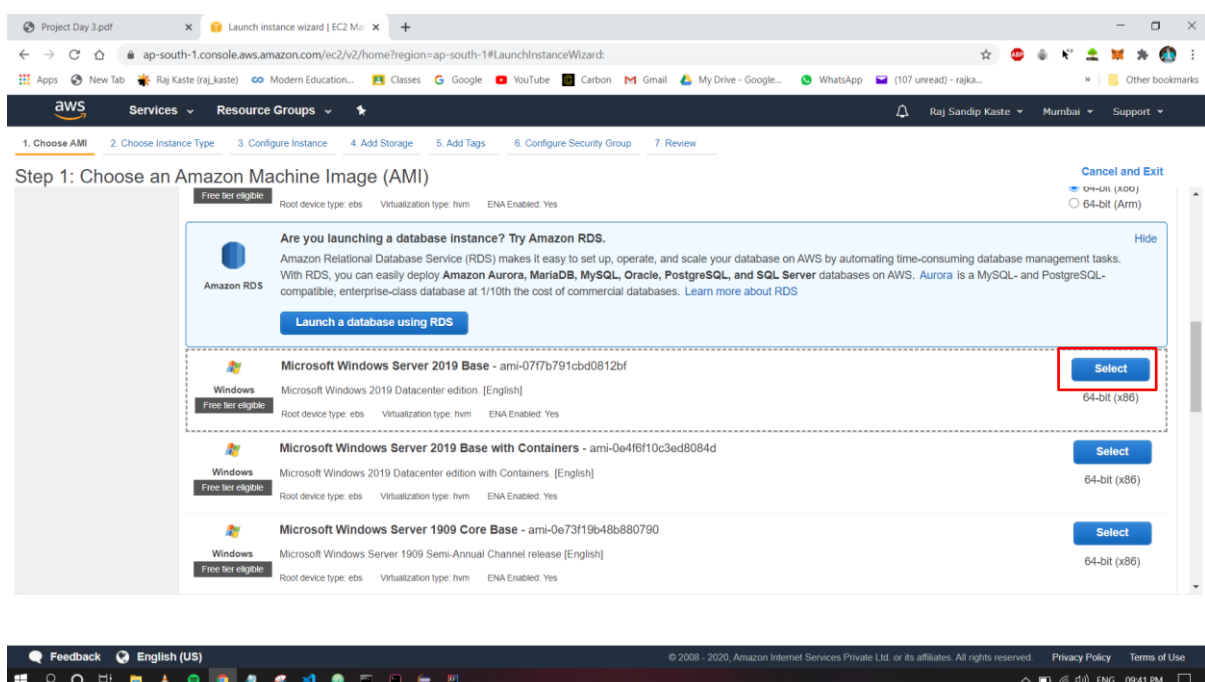
# Project 1:

## Deploying a Web Server in Windows Instance:

Step 1: Login to your AWS Console -> Go to Services -> Select EC2 -> In EC2 Dashboard select Instances -> Click on Launch Instance.



Step 2: Starting with EC2 (Elastic Compute Cloud) and launching a new instance Choose an AMI -> MS Windows Server 2019 Base OS under Free Tier Section.



Step 3: Choose an Instance type which should be free tier eligible -> Select t2 micro and then click, Next: Configure Instance Details.

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. Learn more about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Step 4: Configure Instance Details -> No. of instance = 1, Auto-assign Public IP = Enable -> Click Next: Add Storage.

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances 1 Launch into Auto Scaling Group

Purchasing option ☐ Request Spot instances

Network vpc-97de3afc (default) Create new VPC

Subnet No preference (default subnet in any Availability Zone) Create new subnet

Auto-assign Public IP ☒ Use subnet setting (Enable)

Placement group ☐ Add instance to placement group

Capacity Reservation Open

Domain join directory No directory Create new directory

IAM role None Create new IAM role

Shutdown behavior Stop

Stop - Hibernate behavior ☐ Enable hibernation as an additional stop behavior

Enable termination protection ☐ Protect against accidental termination

Cancel Previous Review and Launch Next: Add Storage

Step 5: Let everything be default in Add Storage.

Delete on Termination must be selected. -> Click Next: Add Tags.

The screenshot shows the 'Add Storage' step in the AWS Launch Instance Wizard. The 'Delete on Termination' checkbox is checked and highlighted with a red box. The 'Add New Volume' button is visible. A note at the bottom states: 'Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. Learn more about free usage tier eligibility and usage restrictions.'

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/sda1	snap-0e8cded59551e93cb	30	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypted

Buttons: Cancel, Previous, Review and Launch, Next: Add Tags

Step 6: Enter any name you want for your instance in Add Tags. -> Click Next: Configure Security Group.

The screenshot shows the 'Add Tags' step in the AWS Launch Instance Wizard. A tag with the key 'Name' and value 'Windows' is added. The 'Value' field is highlighted with a red box. The 'Add another tag' button is visible. The 'Next: Configure Security Group' button is highlighted.

Key	Value	Instances	Volumes
Name	Windows	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Buttons: Cancel, Previous, Review and Launch, Next: Configure Security Group

Step 7: In Configure Security Group -> Create a new security group ->

Select Type = All Traffic and Source = Anywhere. -> Click Next: Review and launch.

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group

☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
All traffic	All	0 - 65535	Anywhere	e.g. SSH for Admin Desktop

Add Rule

**Warning**  
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

Step 8: Review all steps -> Click Launch.

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

**Improve your instances' security.** Your security group, launch-wizard-1, is open to the world.  
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only.  
You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details

Microsoft Windows Server 2019 Base - ami-077b791cbd0812bf

Free tier eligible

Root Device Type: ebs Virtualization type: hvm

If you plan to use this AMI for an application that benefits from Microsoft License Mobility, fill out the [License Mobility Form](#). Don't show me this again

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

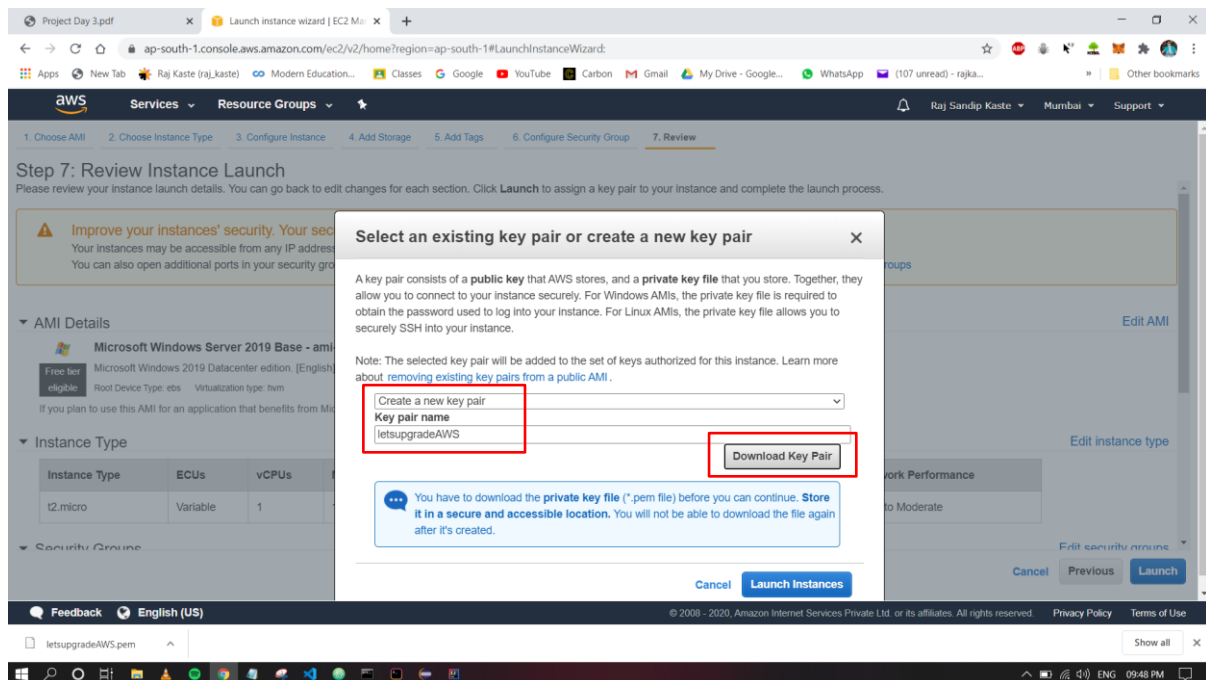
Security Groups

Security group name: launch-wizard-1  
Description: launch-wizard-1 created 2020-08-17T21:39:41.763+05:30

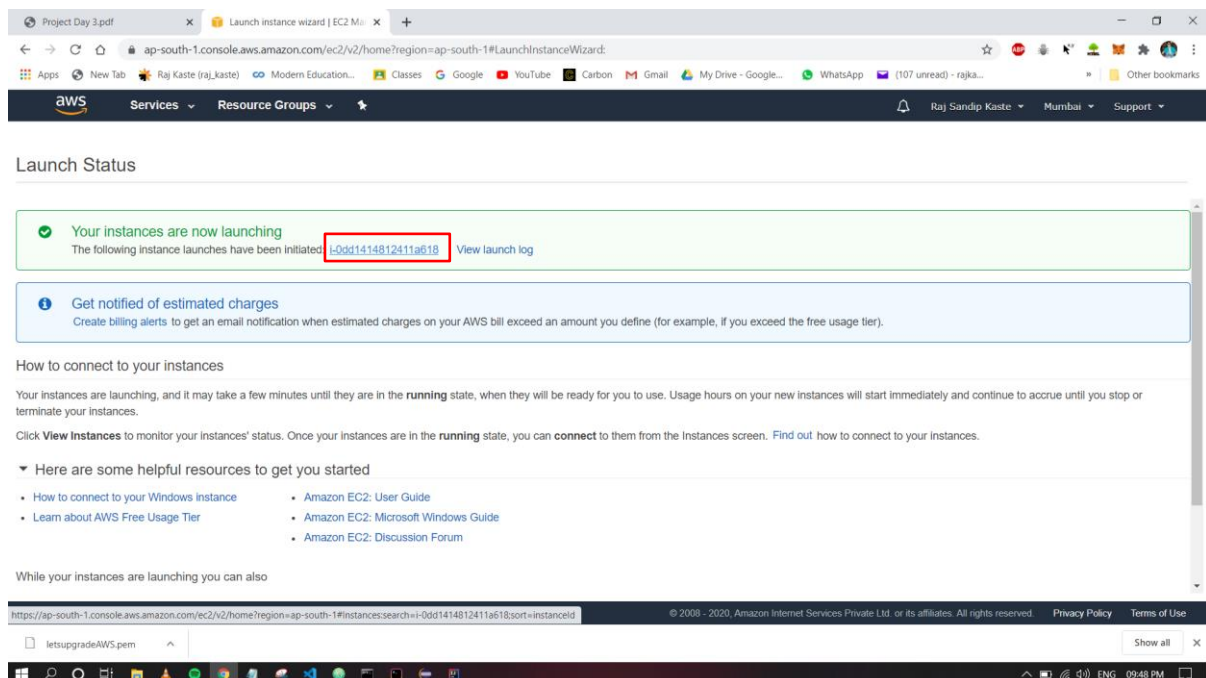
Type	Protocol	Port Range	Source	Description
All traffic	All	All	0.0.0.0/0	
All traffic	All	All	:::0	

Cancel Previous **Launch**

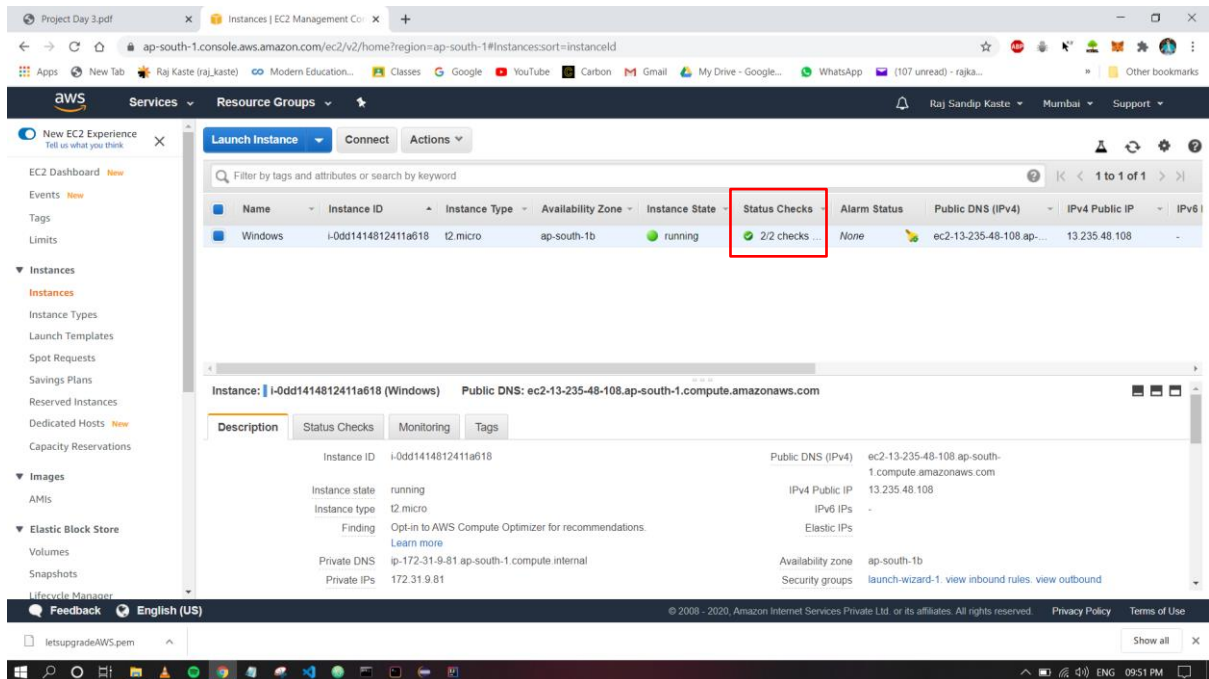
Step 9: After launching create a new key pair and give it a name for authenticity of instance -> Click on Download Key Pair. -> Click Launch Instance.



Step 10: Instance is created. -> Click on instance id which will redirect you to EC2 instances list.



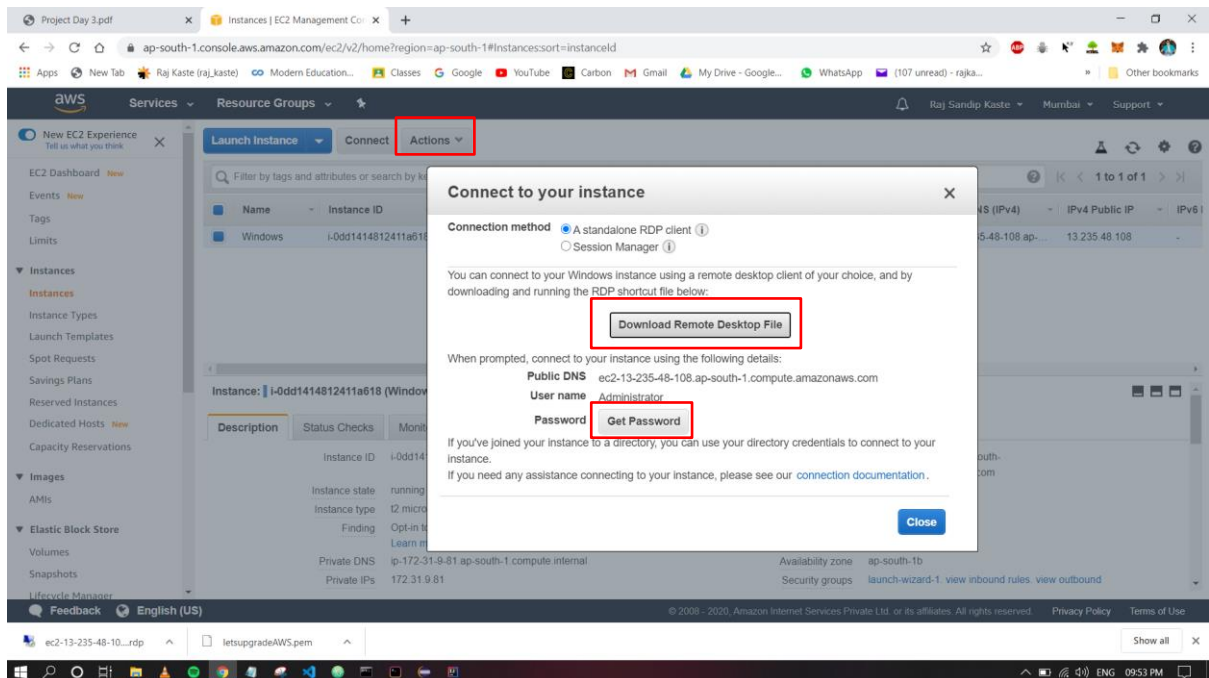
Step 11: Wait till the status checks are done.



Step 12: After Status Check are done go to -> **Actions** -> **Connect**.

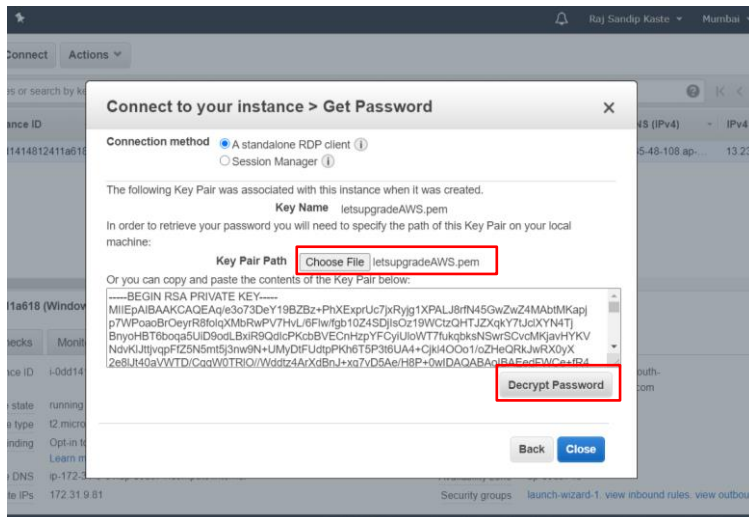
To connect and launch your web server.

Step 13: Download Remote Desktop File -> Click on Get Password.

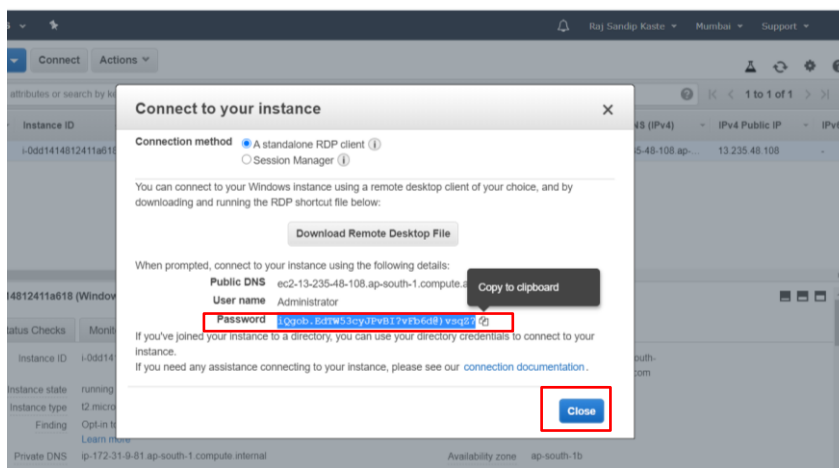




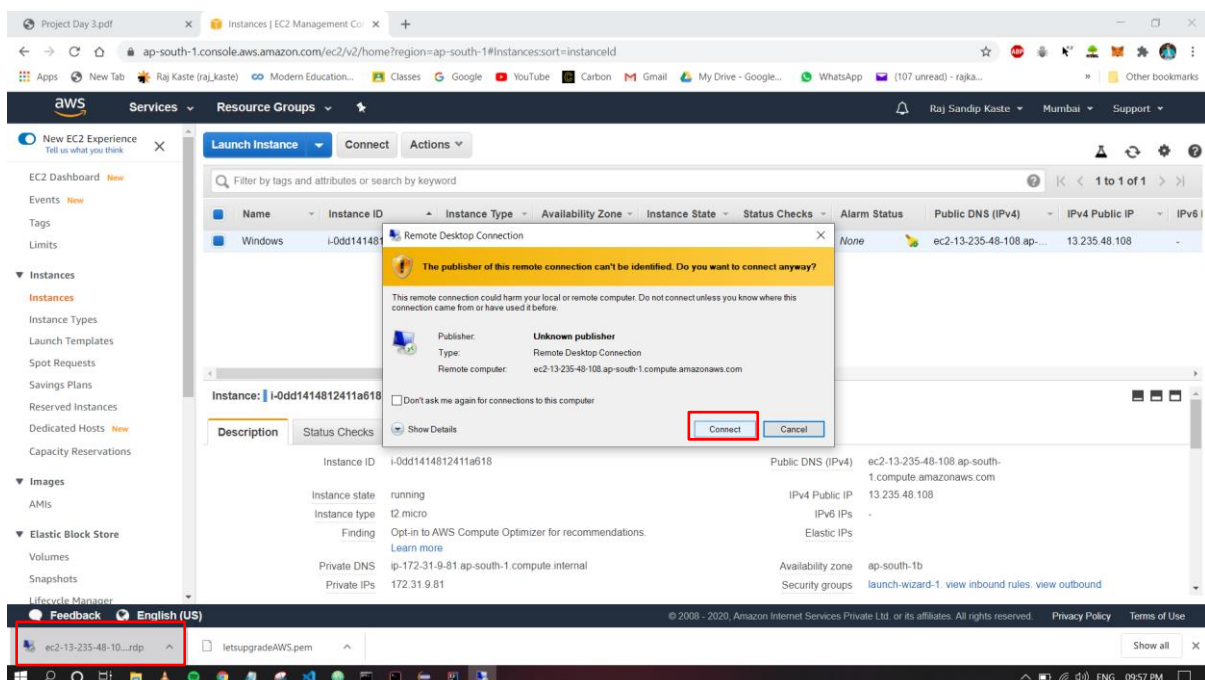
Step 14: Choose your .pem file which was downloaded in Step 9. -> Decrypt it.



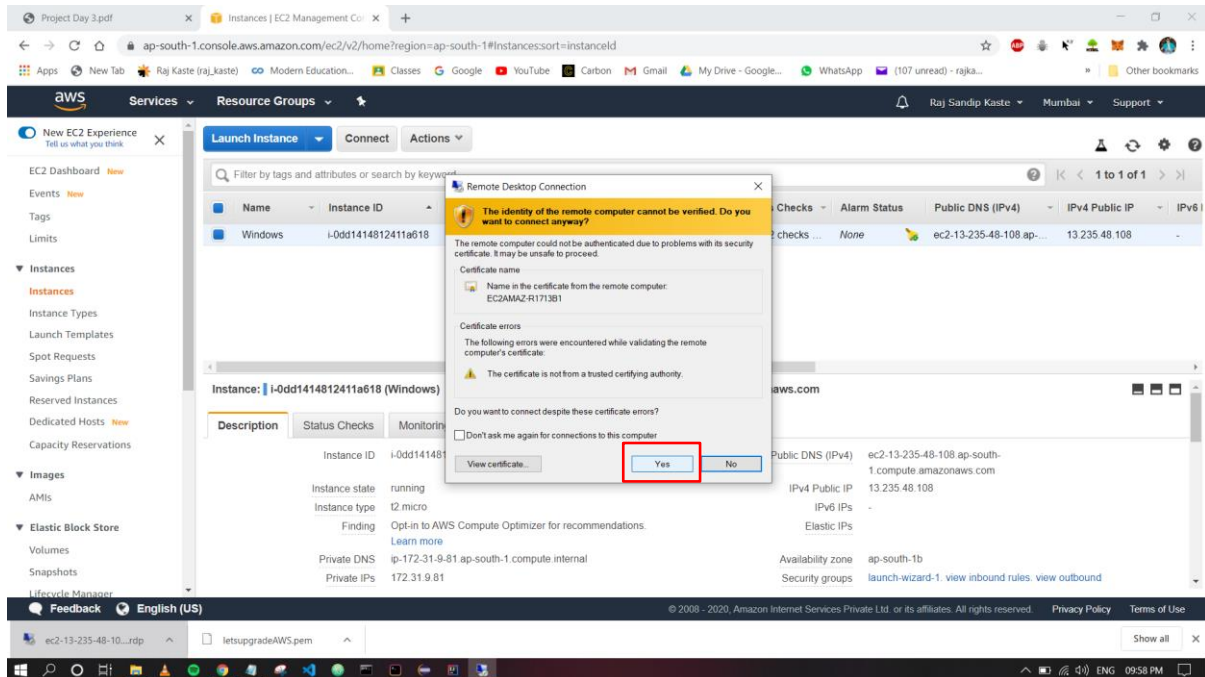
Step 15: Copy the Decrypted Password -> Close.



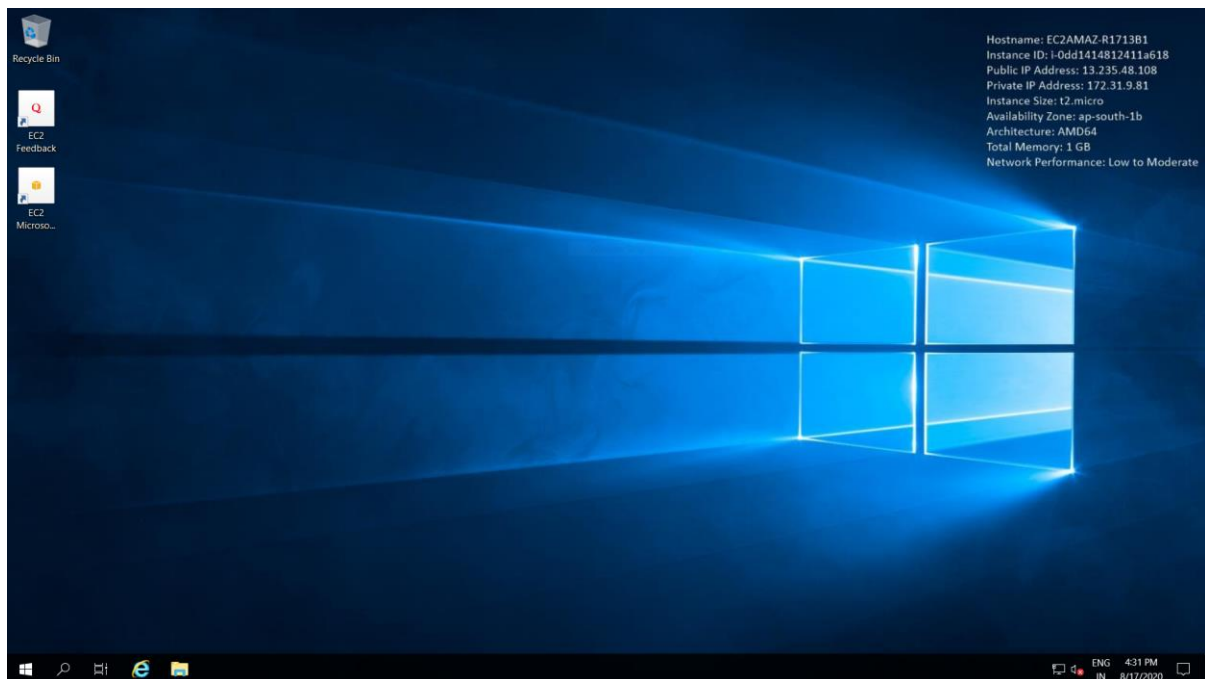
Step 16: Open .rdp file downloaded in Step 13 -> click Connect.



Step 17: While connecting a prompt will appear Enter your Decrypted Password copied in Step 15 -> click Yes.



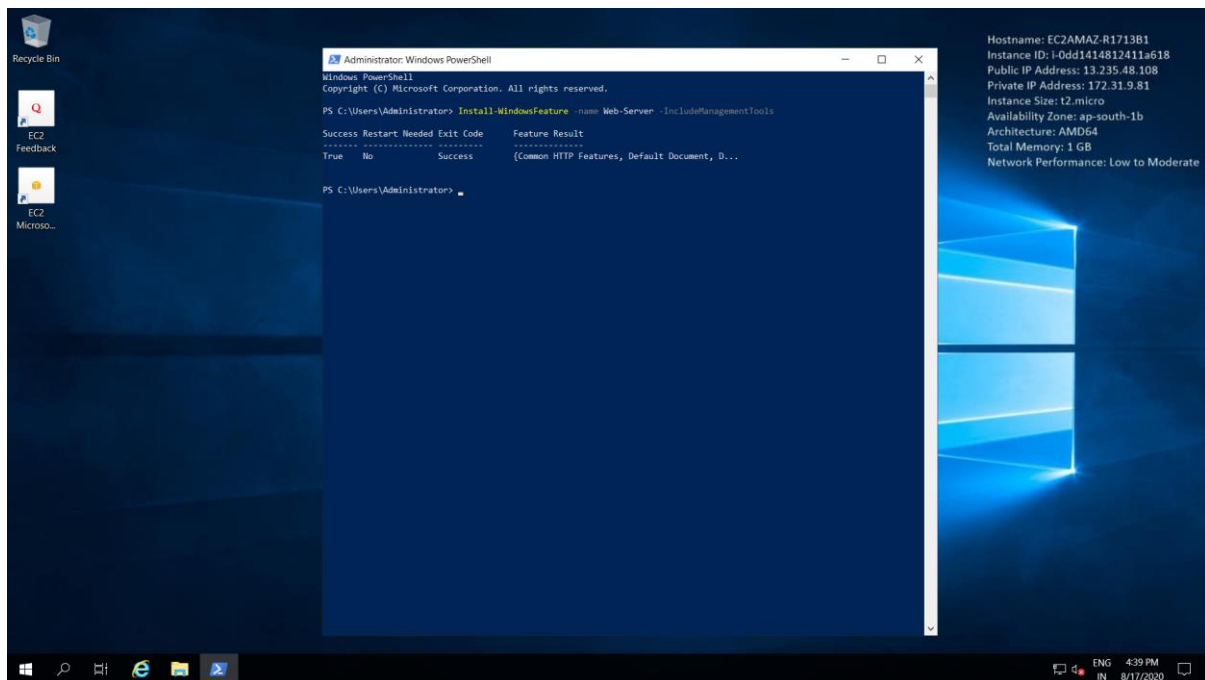
Step 18: Here's the instance launched with virtual private cloud (VPC)





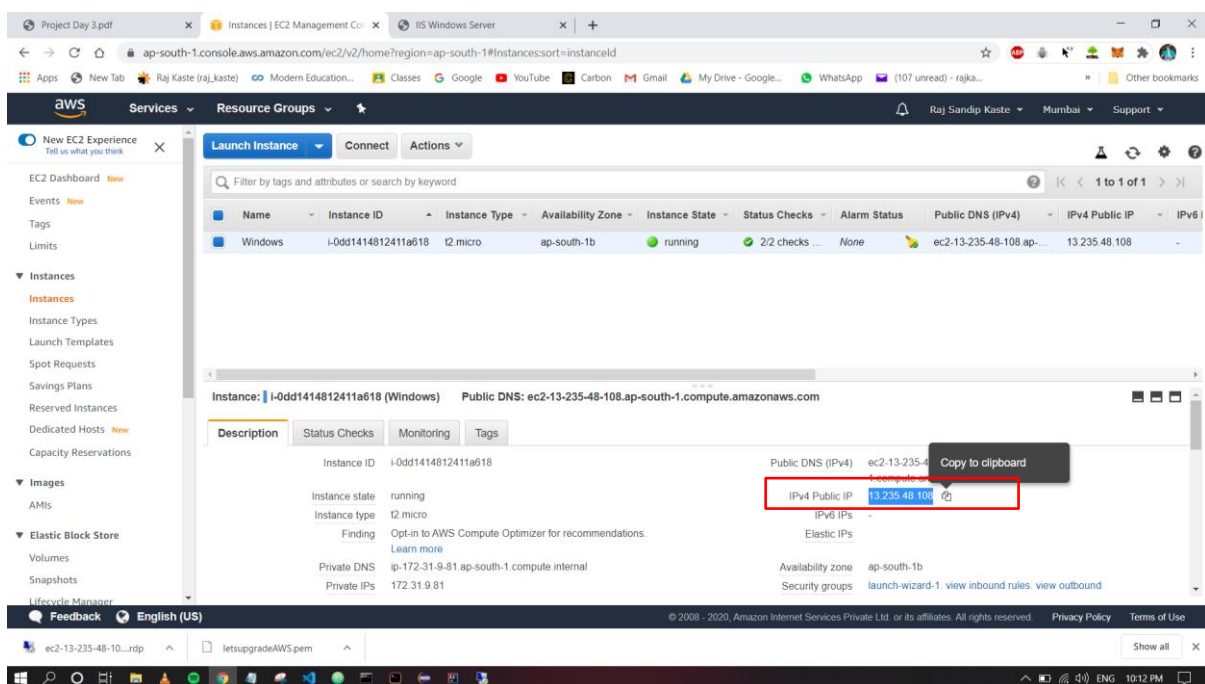
Step 19: Click on Windows button -> open Windows PowerShell and install the IIS Web Server using the command:

**Install-WindowsFeature -name Web-Server -IncludeManagementTools**



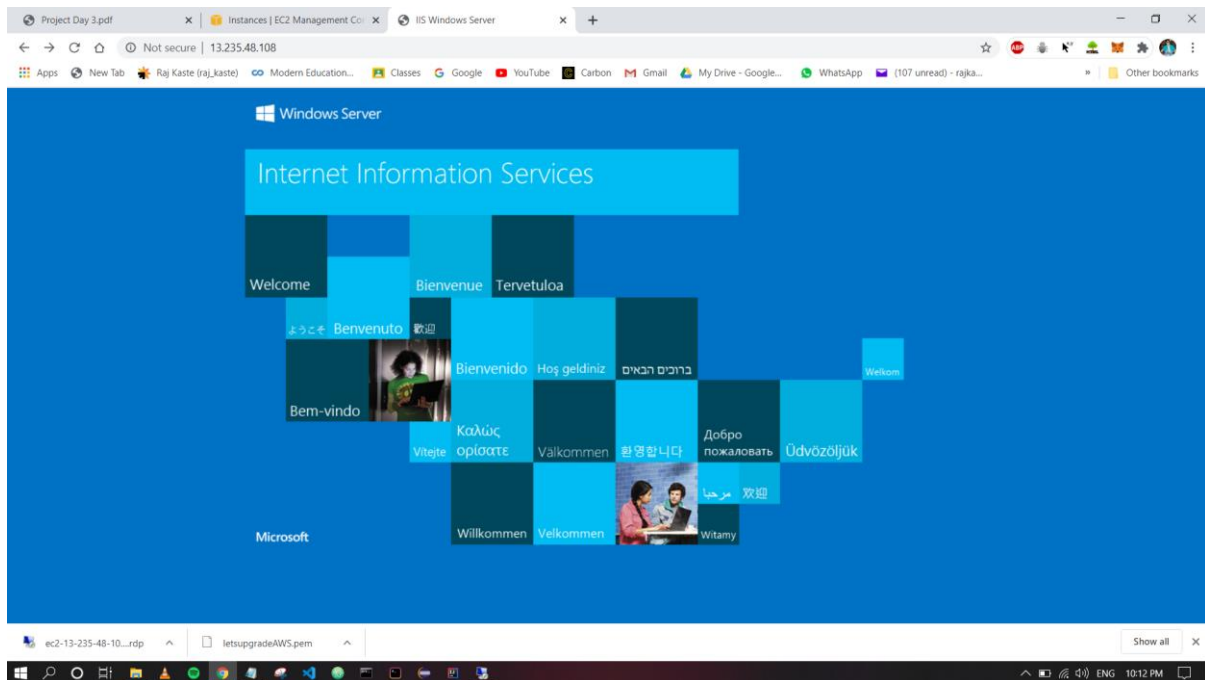
Step 20: After installation webserver will be deployed and can be viewed by public IP address available on the EC2 instances list. -> Copy the IP Address and paste and open it in the Browser.

Public IP address shown here: **13.235.48.108**



## Step 21: Webserver Deployed and Viewed.

With the Public IP address: **13.235.48.108**



**TASK DONE.**

**MAKE SURE THAT THE INSTANCES CREATED ARE TERMINATED AFTER THE USAGE TO AVOID UNNECESSARY CHARGES.**