

Documentation of the Project-ICT171

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Public IP: 13.211.167.137

Domain name: cricketingworld.com

Github Repo: <https://github.com/aameer07/ICT171.git>

Video Explainer:

<https://drive.google.com/file/d/1kYF9ub7lrYXUq2vp1EKzdSvGCrh3m9ik/view>

1. Introduction:

I have created this project by using Amazon EC2 from Amazon Web Services. I used Windows PowerShell to connect the EC2 instances to the server. I purchased the domain for the web from GoDaddy. It cost me \$21 per year.

2. Launching Instance:

First of all, we need to launch the instance to start the project. To launch the instance, you should go to Amazon Web Services (AWS). Then create an account on AWS or log in if you already have. You can access that page by using this link:

https://signin.aws.amazon.com/signup?request_type=register

You should use your Murdoch ID to create an account. It will charge you \$1 and you will all set to use it. On top, there is a search bar, go to that and search for 'EC2'. Go to EC2 and click the option 'instances' from the options given below. After that, you will see all your recently launched instances. If you want to launch a new instance, there will be an

option on the top right corner in yellow colour displaying 'Launch instances', hit that button and you will see a new page.

Do the following actions on that page:

- Name and tags: Give a name to your web server.
- Application OS images: choose Ubuntu 24.04 LTS; it is free.
- Instance type: choose t2.micro, only it is be free.
- Key pair: Give a name to your key pair; it will be used to connect the instance. You can also select from recently created key pairs.
- Network setting: Allow all three options of HTTPS traffic.

After doing all the above settings, there is an option of 'launch instance' Hit that option, and the instance will be launched. You can see the status of your instance on the main instance page.

Name and tags Info

Name

Add additional tags

Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Recents

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

SUSE Linux

Debian

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 AMI

ami-07b7cae50f732535f (64-bit (x86), uefi-preferred) / ami-Qa06008c37dfe916b (64-bit (Arm), uefi)

Free tier eligible

Description

Amazon Linux 2023 is a modern, general purpose Linux-based OS that comes with 5 years of long term support. It is optimized for AWS and designed to provide a secure, stable and high-performance execution environment to develop and run your cloud applications.

Amazon Linux 2023 AMI 2023.7.20250527.1 x86_64 HVM kernel-6.1

Architecture

64-bit (x86)

Boot mode

uefi-preferred

AMI ID

ami-07b7cae50f732535f

Publish Date

2025-05-30

Username

ec2-user

Verified provider

Instance type Info | [Get advice](#)

Instance type

t2.micro

Free tier eligible

All generations

▼ Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Select

Create new key pair

▼ Network settings Info

Edit

Network Info

vpc-08d6f39c906960700

Subnet Info

No preference (Default subnet in any availability zone)

Auto-assign public IP Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

We'll create a new security group called 'launch-wizard-7' with the following rules:

☒ Allow SSH traffic from

Helps you connect to your instance

Anywhere

0.0.0.0/0

☐ Allow HTTPS traffic from the internet

To set up an endpoint, for example when creating a web server

☐ Allow HTTP traffic from the internet

To set up an endpoint, for example when creating a web server

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.

▼ Configure storage Info

Advanced

1x 8 GiB gp3

Root volume, 3000 IOPS, Not encrypted

Free tier eligible customers can get up to 30 GiB of EBS General Purpose (SSD) or Magnetic storage

Add new volume

3. Web server installation:

Connect the instance:

- Hit the connect option from the instances page.
- Go to 'SSH client'.
- Copy 'example' link.
- Open PowerShell and paste that link there.
- Update Apache using this command: `sudo apt update`.
- Install Apache using this command: `sudo apt install apache2`.

Visit the web server by using IP address and check whether it works. You will see a page on the web server showing 'it works'.



Connect [Info](#)

Connect to an instance using the browser-based client.


EC2 Instance Connect Session Manager **SSH client** EC2 serial console

Instance ID

 [i-076183abd63dae68e](#) (Cricketing World)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is webkey.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.
 `chmod 400 "webkey.pem"`
4. Connect to your instance using its Public DNS:
 `ec2-13-211-167-137.ap-southeast-2.compute.amazonaws.com`

Example:

 `ssh -i "webkey.pem" ubuntu@ec2-13-211-167-137.ap-southeast-2.compute.amazonaws.com`

 **Note:** In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\DELL> cd downloads
PS C:\Users\DELL\downloads> ssh -i "webkey.pem" ubuntu@ec2-13-211-167-137.ap-southeast-2.compute.amazonaws.com
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1024-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Tue Jun 10 21:07:08 UTC 2025

System load:  0.0          Processes:           109
Usage of /:   35.7% of 6.71GB Users logged in:      0
Memory usage: 28%         IPv4 address for enX0: 172.31.8.118
Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
compliance features.

https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

57 updates can be applied immediately.
15 of these updates are standard security updates.
To see these additional updates run: apt list --upgradable

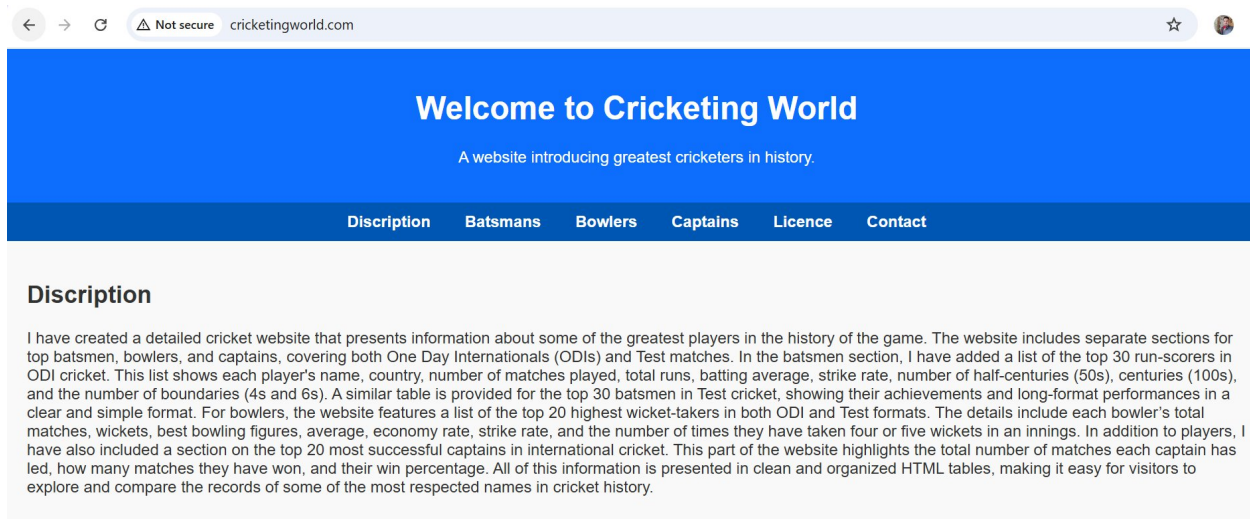
Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

*** System restart required ***
Last login: Thu Jun  5 17:54:04 2025 from 1.146.142.120
ubuntu@ip-172-31-8-118: $ sudo apt update
Hit:1 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [1118 kB]
Get:5 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [161 kB]
Get:6 http://ap-southeast-2.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1078 kB]
```

Modification:

- Modify the server by using this command: `sudo nano /var/www/html/index.html`
- Write your own content and coding to modify your server.

Server after update:



4.DNS configuration:

Register domain:

- Go to GoDaddy: <https://www.godaddy.com/>
- Choose any name for the domain and search it in GoDaddy.
- You will see different offers for yearly or 3 years, or 5 years.
- Select the domain, purchase it, and you will be able to use it.

My domain name: cricketingworld.com.

Plan and cost: \$21 for 1 year.

Connect the domain:

- In AWS, search networking and content delivery.
- Choose Route 53 and get started.

Create a hosted zone:

- Select 'create hosted zone' option and click get started.
- New page will open.
- Enter your domain name.
- Select public hosted zone.
- And click 'create hosted zone'.

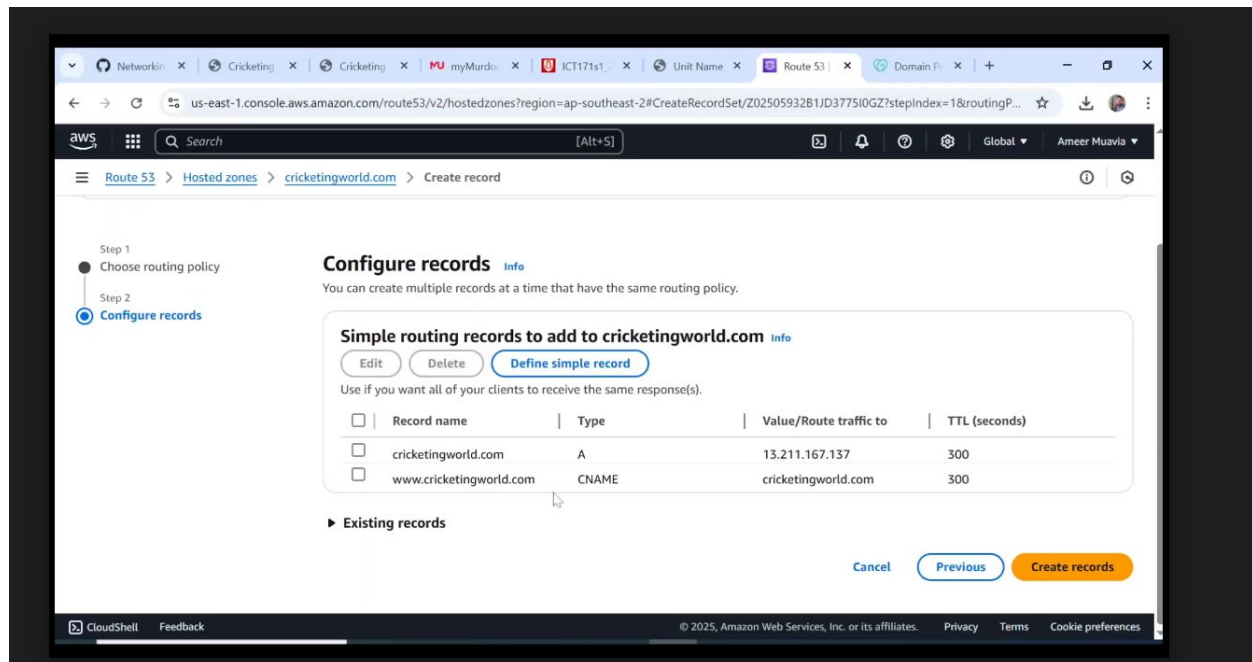
Create record:

- Go to 'create record'.
- Click on 'switch to wizard'.
- Choose 'simple routing' and click next.
- Click 'define simple record', enter your IP address.
- Again, go to 'define simple record', choose the option 'cname', and enter your domain name.
- Click on create record.

Change Nameservers:

- Go to GoDaddy, click 'DNS', click on 'nameservers'.
- Go to 'change nameservers'.
- Copy all your nameservers from the records and paste them here.
- Click save.

It will take 10 minutes, and your domain will be successfully connected to your web server. Then you will be able to access your website by using the domain name.



5. Video explainer

- Instance launching
- Connecting it to the web server from PowerShell.
- Modification into PowerShell and Python coding.
- Domain registration.
- Connecting the domain to the server.
- Git repository.

6. GitHub repository

- Name: ICT171
- Link to video explainer
- Link to web server
- Documentation of the project

7. References

AWS https://signin.aws.amazon.com/signup?request_type=register

Godaddy <https://www.godaddy.com/>

Github <https://github.com/aameer07/ICT171.git>