THERE ARE FOUR ENVIRONMENTS WE WILL BE INTRODUCING TO YOU IN AWS.

In real life, some companies operate and run these four environments while others use more, and these depend on the nature of their business.

A Software company will have more environment than a company that doesn't run a software business.

Example of a Software structure of their company's IT Environment:

QUALITY ASSURANCE (QA) AND TESTING ENVIRONMENT:

Quality Assurance (QA) and Testing, referred to as (QAT), controls the Testing process and verifies that software can work under the given conditions.

Testing concentrates on case studies, their implementation, and evaluation. QA and Testing work in the same direction and focus on product quality.

TESTING ENVIRONMENT:

The testing environment allows the Quality Assurance (QA) engineers to test new codes and change current code via automated or non-automated techniques.

Development environments are ever-changing as developers keep adding new functionalities, making it difficult for QA teams to run time-consuming tests.

So, a testing environment is where they can execute more complex and time-consuming tests.

DEVELOPMENT ENVIRONMENT:

As the name suggests, this is where the software development takes place. It is the first environment where developers write the first lines of code and do all the code updates.

This environment usually consists of a server shared by several developers working together on the same project.

STAGING ENVIRONMENT:

This environment is a near replica of the production environment, so it seeks to mirror a natural production environment as closely as possible to ensure the software works correctly.

The staging environment is often restricted to a small number of selected users, so it is limited to specific IPs and developer teams.

This environment aims to test on a near-production level but in a non-production environment to verify that the application will behave correctly after deployment. Thus, it represents a safe space away from the public eye to ensure everything works as expected; it is kept invisible to end-users.

The focus here is to test the application or software as a whole. In other words, staging environments are where you can conduct tests to ensure that no problems come up in production and limit the negative impact on users there.

So that when the software is deployed to the production environment, there will be fewer errors to fix.

PRODUCTION ENVIRONMENT:

This is where the software is produced and is running on a production server. It has officially gone live to real users. For example, you went to www.cloudticians.org and were able to sign up for this class, and this was possible because the website is now live, and this is what going live means.

IN A NON-SOFTWARE DEVELOPMENT ENVIRONMENT, COMPANIES RUN ABOUT 4 ENVIRONMENTS (CLOUD AND IT department example).

1. **THE DEVELOPMENT AND TESTING ENVIRONMENT:**
Your AWS Cloud Environment or IT Environment generally; is the environment (Virtual) used for testing out new ideas before they're progressed to the next stage (Staging Environment). You build, tear down, and re-build until you're satisfied with whatever you're making.

Development and Testing environment are like Carpentry workshops where furniture is made; see example: https://www.philadelphiafurnitureworkshop.com/

2. **SHARED SERVICES ENVIRONMENT:**
(An Account with IT Resources shared between several departments in the same company), company employees share firewall software, email server, etc.

Let's look at another dumb down example: You share the bathroom at home with your siblings, but when it comes time to sleep, you sleep in your private bedroom within the same house.

That activity in your home is referred to as shared services if your home was an IT environment, understand? You better! :).

3. STAGING:
This environment is nearly a replica of the production environment. It seeks to mirror a natural production environment as closely as possible

to ensure the network or application servers (Virtual Computer Servers) work correctly.

Virtual computer servers are servers that function like the waiters/servers in a restaurant. They take your order and present it to the chef, who goes on to prepare the meal delivered from the Menu and hand it back to the server/waiter so they can bring it back to you.

4. PRODUCTION ENVIRONMENT:
This is where the web application server (Website or your favorite www.cloudticians.org) is migrated to from the Staging, and it's running with no expected interference.

It has officially gone live to real users, and the users trust that you'd be up and running 24/7 and have no expectations anything else could go wrong.

See it as a Furniture showroom, where the furniture workshop exports her product after it's been constructed and developed.

Example:
https://www.goodhomes.co.in/home-and-design-trends/architecture/this-furniture-showroom-by-fadd-studio-is-a-hub-for-modern-home-ideas-6830-2.html

www.swarar.com
www.henscen.com
www.russfair.com
www.morinlavo.com

Finally, we have the other account. It's not an environment but a Service in Amazon Web Services. This is what we call, The AWS Organization.

AWS ORGANIZATION:

It is a service designed to be a bill payer; it aggregates all the expenses in DevTest, Staging, Shared Services, and Production Account and combines them into one bill.

So instead of staging paying AWS directly for all the data it has used, it combines her bill with the other guys to form a single expense, and AWS Organization helps pay the bill.

AWS Organization is the wife/mother of the family that manages the family finances well; why Daddy is busy spending money, Mommy is making sure the bills he owes are paid on time. Mommy doesn't necessarily need to spend her cash, and she could help Daddy and ensure no late payment is reported on his excellent credit status.

Source: https://aws.amazon.com/organizations/