We will deploy application on cloud server .
Create a virtual server on cloud provider .
Deploy app on server and configure access .

What is infrastructure as a service >
Your application has to run somewhere , you need jenkins on a server
Company can buy a servers , you mange own server and infrastructure . Fix all if something breaks.
Move your physical infrastructure to the cloud , dedicated infrastructure management .
U just rent the servers.
Eg : company's provide iaas are AWS , digital ocean , google cloud, azure . U rent servers from then as virtual machine .
AWS is most widely used and more powerful more complex also .

Servers we create on digital oceans are called droplets .
.ssh key from your local pc , cat ~/.ssh/id_rsa.pub will get u public ssh key .
Copy the output and past in digital ocean add public ssh key .

By default the server created in not protected >> having all ports open is a bad security practice >
There fore first need to configure firewall . This will explicitly allow access on specific ports .

We need to allow access of our server to port 22 (ssh) -> go to networking and add firewall .
U can add which source u want to access this server add ip address of your local pc there.
Now u can assign this firewall to multiple drop list .

Inbound: incoming request : in which ports are droplets allow connections
Outbound : outgoing request : all the internet connections we can access from our droplets : as we need to install java etc. .. on our remote server(droplets)

Copy the ip address of remote server : open the local terminal and type command : ssh root@ipaddressremoteserver : now we are in our ubuntu remote server as a root user .
Apt update :
Apt install openjdk-8-jre-headless (as we need this version for nexus installations)

Next step :
Build a jar file , copy it to remote server and run app in remote server .
https://github.com/Joeri-Abbo/techworld-with-nana-java-react-example.git this project build it : using gradle build .
We will get the the jar file on libs folder .
Now we want this jar file to run on ubuntu remote server : using scp : secure copy .
Scp build/libs/jarfilename root@remoteipaddress:/root
Java j-ar java-react-example.jar to run that jar file in remote server.
We will get the port from where the application server is listening at , so we need to access this application from the browser .
We have the public ip address however we don't have port open to access the application .
Add a firewall in the server custom tcp port 7071 allipv4 allipv6 from all sources does not matter who sends it .
Now we make our application available publically from the browser because we open the port where application is running on the server .

Go to droplet copy the ip address search on the browser : serveripaddress:7071
Application in running in attach mode to switch from attach mode to make sure we are able to so that we can close the terminal and use it for other commands : Java j-ar java-react-example.jar &
This will help us to check whether the application is running on the server or not : Ps aux | grep java
Apt install net-tools : netstat -lpnt // active internet connection on the server .

Create the separate linux user (not root) for security :
Security best practice :
Create separate user for every application .
Give it only that permission that is used to run that application .
Don’t work with the root user .
Steps :
Adduser vishal
Set password
Add your user to sudo group . (However I want this user to able to execute some of the command that root user can execute)
Usermod -aG sudo vishal
Su - vishal (switch btw different users)
$ = standard linux user
# = root user.
Exit to logout as vishal
Again exit to logout from root user also means form the remote server
Ssh vishal@ipaddressofremoteserver :not able to login because I have to configure ssh key for this user also .
So first ssh root@ipaddre -> su - vishal -> take the public ssh key form the local machine using = cat ~/.ssh/id_rsa.pub
Create .ssh in the remote user vishal : mkdir.ssh -> sudo vim .ssh/authorized_keys
Copy my public ssh key form .sshfolder to here .
Now do ssh vishal@ipaddressremoteserver : able to login as vishal ssh