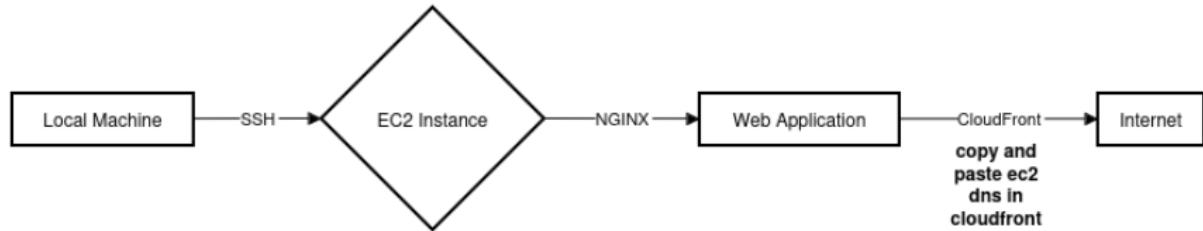


## Task : Deploy Website to EC2 with NGINX and CloudFront.

### Diagrammatic Representation:



### Step 1: Create an EC2 Instance .

EC2 > Instances > Launch an instance

### Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

**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

Search our full catalog including 1000s of application and OS Images

Recents Quick Start

Amazon Linux aws	macOS Mac	Ubuntu ubuntu	Windows Microsoft	Red Hat Red Hat	SUSE Linux SUS
---------------------	--------------	------------------	----------------------	--------------------	-------------------

Amazon Machine Image (AMI)

Browse more AMIs  
Including AMIs from AWS, Marketplace and the Community

**Also add 22 and 80 ports in Security Group.**

The screenshot shows the configuration page for a new AWS Lambda function. At the top, there's a section for "Key pair (login)" with a dropdown menu containing "seytan\_cloud". Below it, a "Network settings" section is expanded, showing "vpc-09066077d7529c57f" under "Network" and "Subnet" set to "No preference (Default subnet in any availability zone)". Under "Auto-assign public IP", the "Enable" option is selected. In the "Firewall (security groups)" section, the "Select existing security group" button is selected, and a dropdown menu shows "default sg-0d7e17daf98d71570 X". A note at the bottom states: "Security groups that you add or remove here will be added to or removed from all your network interfaces."

▼ 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*

seytan\_cloud

Create new key pair

▼ Network settings [Info](#)

Network [Info](#)  
vpc-09066077d7529c57f

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

Common security groups [Info](#)

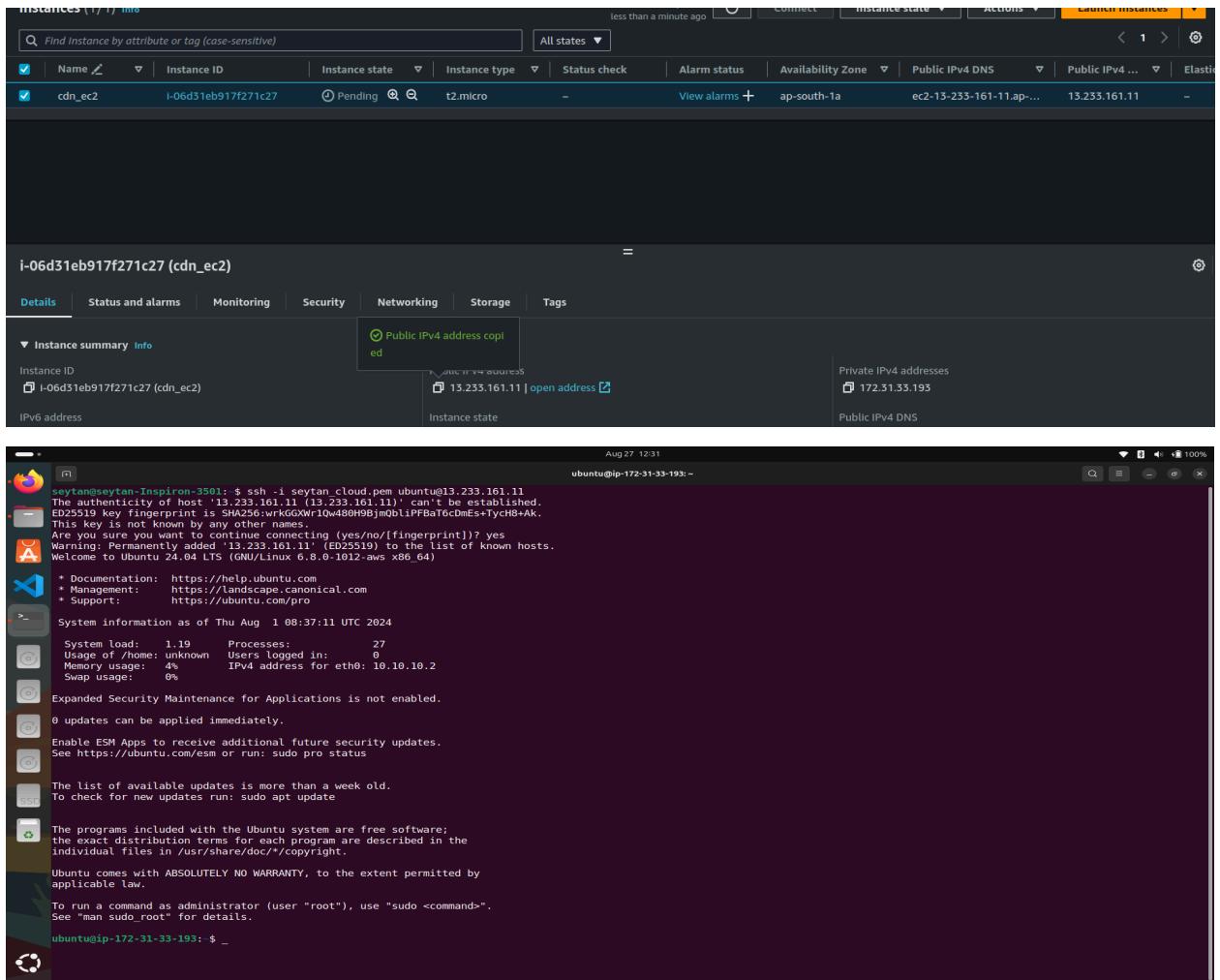
Select security groups

default sg-0d7e17daf98d71570 X  
VPC: vpc-09066077d7529c57f

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

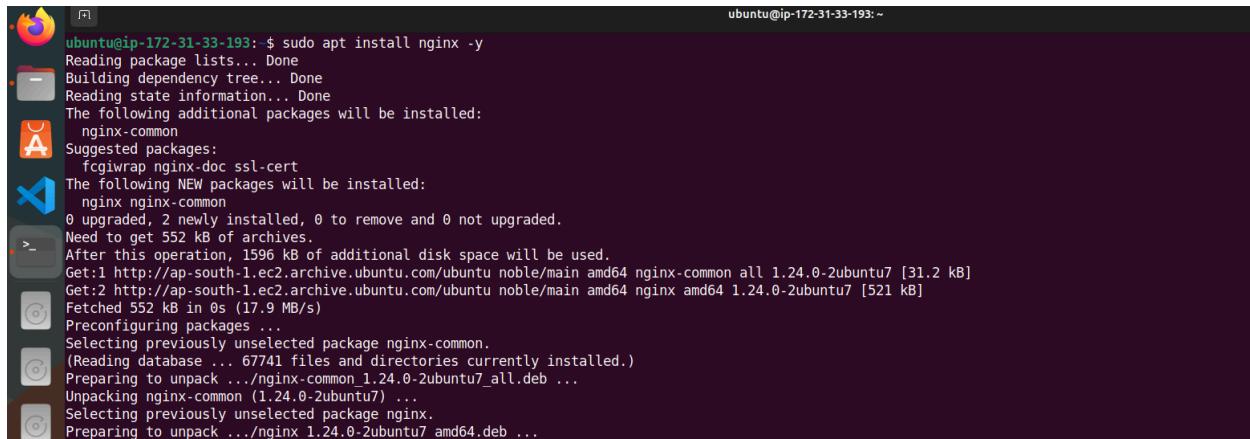
## Step 2: Now get its connection by using command → ssh -i private\_key.pem user@public\_ip



## **Step 3: Next Install the nginx in ec2. Sudo apt install nginx -y**

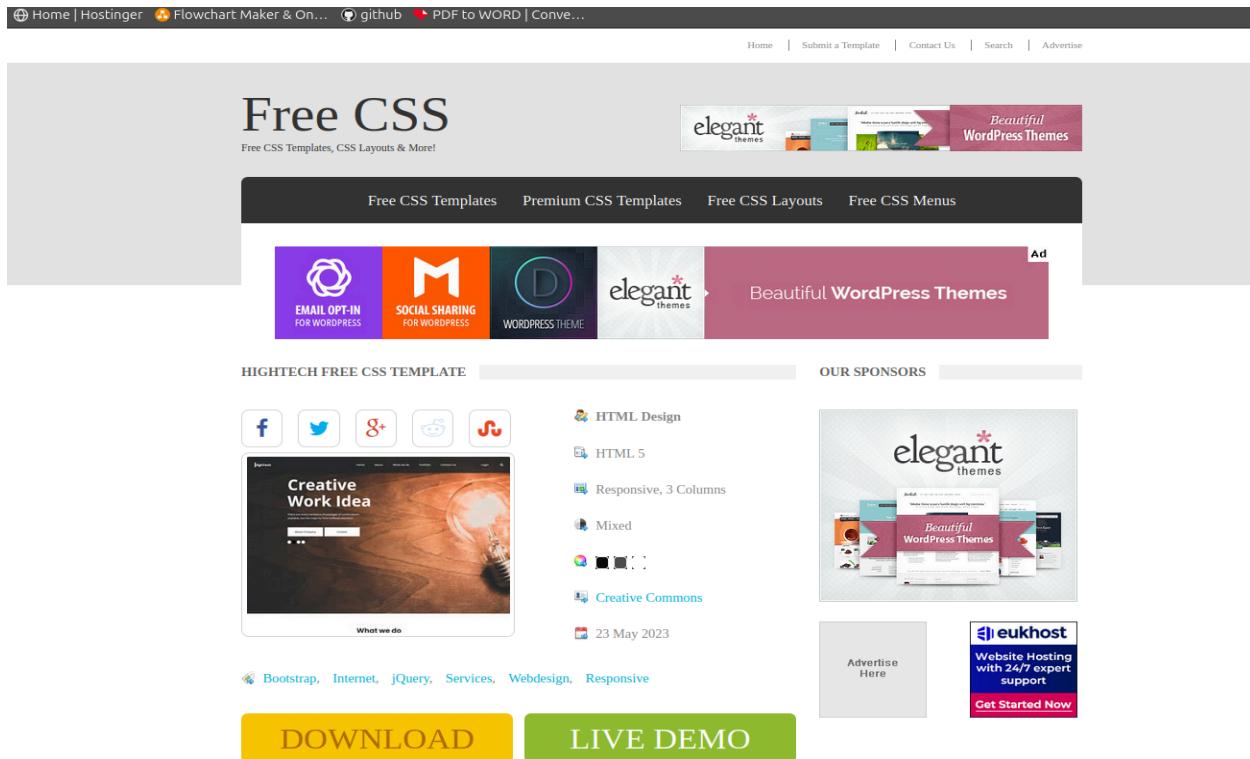
What is nginx ? -->NGINX is a high-performance web server and reverse proxy server known for its scalability, speed, and efficient handling of concurrent connections. It can serve static content,

handle dynamic content with backend processing, and act as a load balancer and reverse proxy.



```
ubuntu@ip-172-31-33-193:~$ sudo apt install nginx -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 0 not upgraded.
Need to get 552 kB of additional disk space.
After this operation, 1596 kB of additional disk space will be used.
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 nginx-common all 1.24.0-2ubuntu7 [31.2 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 nginx amd64 1.24.0-2ubuntu7 [521 kB]
Fetched 552 kB in 0s (17.9 MB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 67741 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7_amd64.deb ...
```

## Step 4: Now Download a free css template.



The screenshot shows the homepage of the Free CSS Templates website. At the top, there's a navigation bar with links for Home, Submit a Template, Contact Us, Search, and Advertise. Below the navigation is a banner for "Beautiful WordPress Themes" from elegant themes. The main content area features a "HIGHTECH FREE CSS TEMPLATE" preview with a dark background and a lightbulb graphic. To the right of the preview are social sharing icons for Facebook, Twitter, Google+, LinkedIn, and StumbleUpon. Below the preview, there's a list of tags: Bootstrap, Internet, jQuery, Services, Webdesign, and Responsive. At the bottom of the page are two large buttons: a yellow "DOWNLOAD" button and a green "LIVE DEMO" button.

**Extract that file and copy the subfiles and subfolder to the home directory of nginx.**

**Also remove the by default index.nginx-debian.html file of nginx from there.**

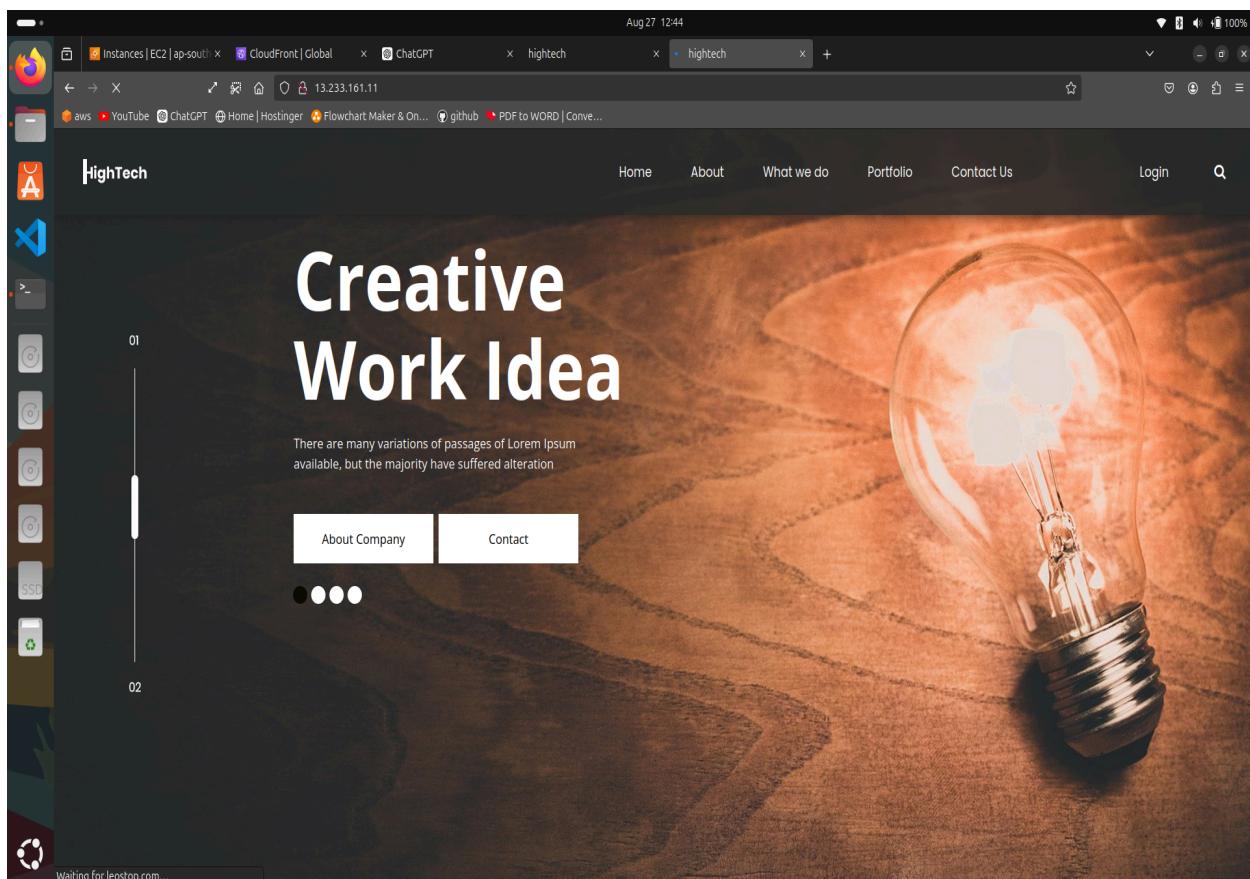
```
ubuntu@ip-172-31-33-193: $ wget https://www.free-css.com/assets/files/free-css-templates/download/page291/hightech.zip
--2024-08-27 07:03:30-- https://www.free-css.com/assets/files/free-css-templates/download/page291/hightech.zip
Resolving www.free-css.com (www.free-css.com)... 217.160.0.242, 2001:8d8:100f:f000::28f
Connecting to www.free-css.com (www.free-css.com)|217.160.0.242|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 5347804 (5.1M) [application/zip]
Saving to: 'hightech.zip'

hightech.zip                                              100%[=====] 2024-08-27 07:03:32 (4.37 MB/s) - 'hightech.zip' saved [5347804/5347804]
```

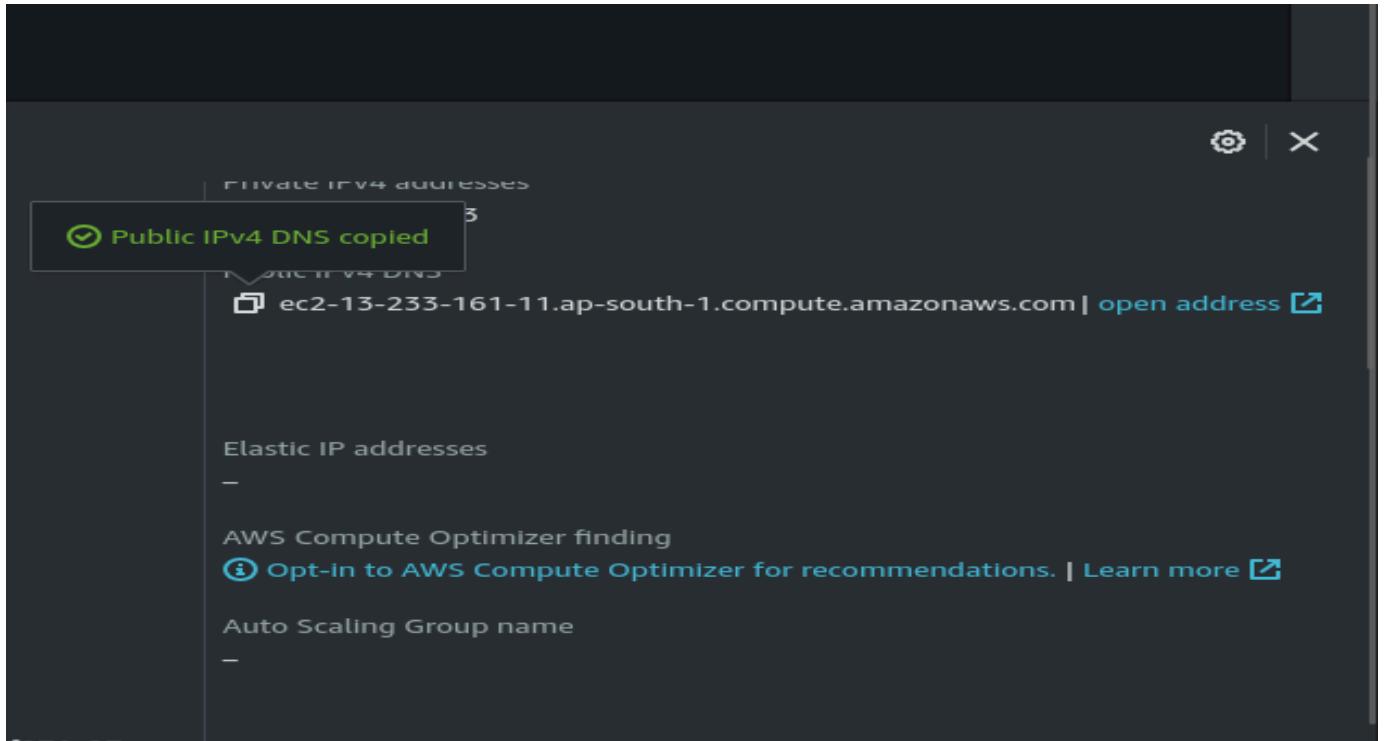
```
ubuntu@ip-172-31-33-193:~$ ls
hightech-html  hightech.zip
ubuntu@ip-172-31-33-193:~$ cp -r hightech-html/* /var/www/html/
cp: cannot create regular file '/var/www/html/about.html': Permission denied
cp: cannot create regular file '/var/www/html/contact.html': Permission denied
cp: cannot create directory '/var/www/html/css': Permission denied
cp: cannot create directory '/var/www/html/fonts': Permission denied
cp: cannot create directory '/var/www/html/icon': Permission denied
cp: cannot create directory '/var/www/html/images': Permission denied
cp: cannot create regular file '/var/www/html/index.html': Permission denied
cp: cannot create directory '/var/www/html/js': Permission denied
cp: cannot create regular file '/var/www/html/portfolio.html': Permission denied
cp: cannot create regular file '/var/www/html/we_do.html': Permission denied
ubuntu@ip-172-31-33-193:~$ sudo cp -r hightech-html/* /var/www/html/
ubuntu@ip-172-31-33-193:~$ cd /var/www/html/
ubuntu@ip-172-31-33-193:/var/www/html$ ls
about.html contact.html  css  fonts  icon  images  index.html  index.nginx-debian.html  js  portfolio.html  we_do.html
ubuntu@ip-172-31-33-193:/var/www/html$ sudo rm index.nginx-debian.html
ubuntu@ip-172-31-33-193:/var/www/html$ _
```

**Step 5:** copy the public ip of ec2 and paste it on browser and check the output.

**Output:**



**Step 6: Now Copy the ec2 dns and paste it while creating a distribution in Cloudfront in the origin domain field.**



CloudFront > Distributions > Create

## Create distribution

**Origin**

**Origin domain**  
Choose an AWS origin, or enter your origin's domain name.  
 X

**Protocol** Info  
 HTTP only  
 HTTPS only  
 Match viewer

**HTTP port**  
Enter your origin's HTTP port. The default is port 80.

**Origin path - optional**  
Enter a URL path to append to the origin domain name for origin requests.

**Name**  
Enter a name for this origin.

Add custom header... optional

## **Step 7: Now Wait till deploying changes to a particular timestamp of deployed for the distribution.**

The screenshot shows the AWS CloudFront Distributions page. It lists one distribution: E2QBZ7B09ISCVS, which is a Production distribution with the domain name d339jskef6vsk.cloudfront.net. The distribution is currently Enabled and has a status of Deploying. The last modified date is August 27, 2024 at 7:07:...

**Once it changes copy the dns of cloudfont and paste it in the browser.**

The screenshot shows the AWS CloudFront Distributions page again. The distribution E2QBZ7B09ISCVS is now listed with the domain name d339jskef6vsk.cloudfront.net. The status is still Enabled, and the last modified date is August 27, 2024 at 7:07:...

## **Output :**

The screenshot shows a web browser window displaying the website "hightech". The URL in the address bar is https://d339jskef6vsk.cloudfront.net. The website features a large, glowing lightbulb on a wooden surface as the background image. The main heading is "Creative Work Idea". Below the heading, there is some placeholder text: "There are many variations of passages of Lorem Ipsum available, but the majority have suffered alteration". At the bottom of the page, there are two buttons: "About Company" and "Contact", along with a set of three dots. On the left side of the browser, there is a vertical sidebar with various icons, likely representing a mobile device interface.