 Working with Terraform Resources -  
  
🔷 Building and Deploying a Simple Website with Terraform  
  
🛠 We'll cover the basics of creating of a security group, launching an EC2 instance, and accessing a hosted website. Ensure you have Terraform installed and configured with AWS credentials before proceeding.  
  
🔑 Step 1: Create a Security Group  
  
🔹 1. Open your preferred text editor and create a file named ' main .tf '.  
  
🔹 2. Add the following Terraform code to create a security group that allows incoming traffic on port 80:  
-------------------------------------------------------  
resource "aws\_security\_group" "web\_server" {  
 name\_prefix = "web-server-sg"  
 ingress {  
 from\_port  = 80  
 to\_port   = 80  
 protocol  = "tcp"  
 cidr\_blocks = ["0. 0. 0. 0/0"]  
 }  
}  
-------------------------------------------------------  
🔹 3. Save the file.  
  
🔹 4. Open a terminal and navigate to the directory containing your 'main .tf ' file.  
  
🔹 5. Run the following commands:  
-------------------------------------------------------  
↪ terraform init  
↪ terraform apply  
-------------------------------------------------------  
  
🔹 6. Confirm by typing ' yes ' when prompted. Terraform will create the security group.  
  
🔑 Step 2: Create an EC2 Instance  
  
🔹 1. Open your ' main .tf ' file and add the following code to create an EC2 instance:  
-------------------------------------------------------  
resource "aws\_instance" "web\_server" {  
 ami      = "ami-0557a15b87f6559cf"  
 instance\_type = "t2.micro"  
 key\_name   = "my-key-pair"  
 security\_groups = [  
 https: //[lnkd.in](http://lnkd.in/) /e3-WUVCy  
 ]  
 user\_data = <<-EOF  
 #!/bin/bash  
 echo "<html><body><h1>Welcome to my website!</h1></body></html>" > index.html  
 nohup python -m SimpleHTTPServer 80 &  
 EOF  
}  
-------------------------------------------------------  
❗ Replace the ' ami ' and ' key\_name ' values with your own.  
  
🔹 2. Save the file.  
  
🔹 3. Run the following commands:  
-------------------------------------------------------  
↪ terraform apply  
-------------------------------------------------------  
❗ Confirm by typing ' yes '. Terraform will create the EC2 instance.  
  
🔑 Step 3: Access Your Website  
  
🔹 1. Once the EC2 instance is created, open your web browser and enter the public IP address of your EC2 instance:  
-------------------------------------------------------  
↪ http: //<your-ec2-instance-public-ip>  
-------------------------------------------------------  
❗ Replace ' <your-ec2-instance-public-ip> ' with the actual public IP address.  
  
🔹 2. If set up correctly, you'll see the welcome message on your website.  
  
🔹 3. You've successfully created a security group, launched an EC2 instance, and hosted a website.  
  
💡 Remember to run terraform destroy when done experimenting to avoid unnecessary costs. This destroys all resources created by your Terraform configuration.