Cybersecurity

Project 1 Technical Brief
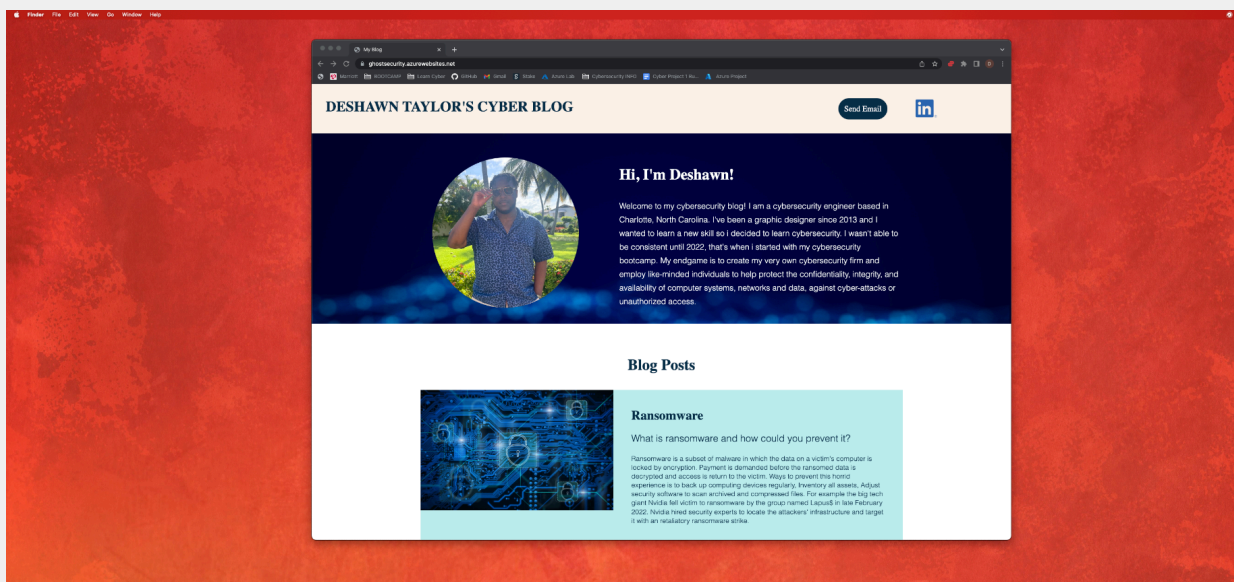
Web Application
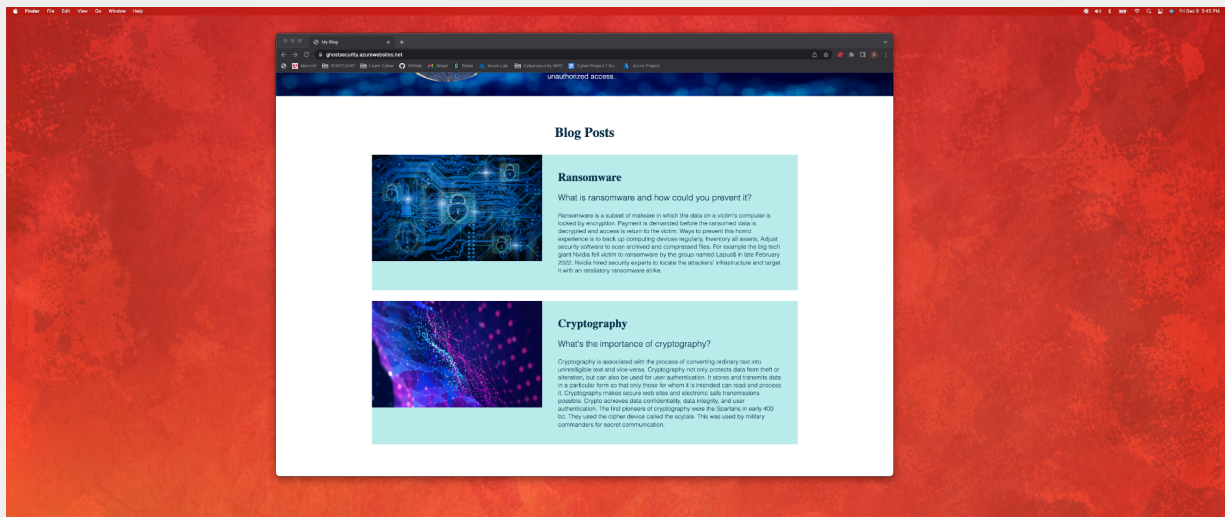
Enter the URL for the web application that you created:

[https://ghostsecurity.azurewebsites.net/]

Paste screenshots of your website created (Be sure to include your blog posts):

[

]

General Questions

1. What option did you select for your domain (Azure free domain, GoDaddy domain)?

[Azure free domain]

2. What is your domain name?

[GhostSecurity]

Networking Questions

1. What is the IP address of your webpage?

[20.211.64.13]

2. What is the location (city, state, country) of your IP address?

```
[Eastern Australia]
```

3. Run a DNS lookup on your website. What does the NS record show?

```
Non-authoritative answer:
ghostsecurity.azurewebsites.net canonical name =
waws-prod-sy3-091.sip.azurewebsites.windows.net.
waws-prod-sy3-091.sip.azurewebsites.windows.net canonical name =
waws-prod-sy3-091-a15c.australiaeast.cloudapp.azure.com.

Authoritative answers can be found from:
australiaeast.cloudapp.azure.com
      origin = ns1-06.azure-dns.com
      mail addr = msnhst.microsoft.com
      serial = 10001
      refresh = 900
      retry = 300
      expire = 604800
      minimum = 60
```

Web Development Questions

1. When creating your web app, you selected a runtime stack. What was it? Does it work on the front end or the back end?

```
[Runtime was PHP 8.0 and the front end.]
```

2. Inside the `/var/www/html` directory, there was another directory called assets. Explain what was inside that directory.

```
[The css files for the original website page from robert smith]
```

3. Consider your response to the above question. Does this work with the front end or back end?

```
[back end]
```

Cloud Questions

1. What is a cloud tenant?

[A Customer who purchases cloud computing resources.]

2. Why would an access policy be important on a key vault?

[The policy determines whether a user,application or user group can perform different operations on key vaults secrets, certificates, or keys.]

3. Within the key vault, what are the differences between keys, secrets, and certificates?

[Keys are asymmetric algorithms.They have a private key and a public key. On the other hand a certificate is the public key. Its job is to bind a name to a public key. Secret is anything that is sensitive that is not a key or certificate.]

Cryptography Questions

1. What are the advantages of a self-signed certificate?

[Testing a website before it's available to the general public.this saves site owners and developers the cost of purchasing a CA-signed certificate while still providing some security benefits.]

2. What are the disadvantages of a self-signed certificate?

[self signed certificates are not verified by a reputable third-party, so you're taking a big gamble when it comes to authenticity and effectiveness.]

3. What is a wildcard certificate?

[A wildcard is a single certificate with a wildcard character (*) This
allows the certificate to secure mettle sub domain names (hosts) pertaining
to the same base domain.   ]

4. When binding a certificate to your website, Azure only provides TLS versions 1.0,
   1.1, and 1.2. Explain why SSL 3.0 isn't provided.

[SSL 3.0 is dangerous.that SSL has known exploitable vulnerabilities.]

5. After completing the Day 2 activities, view your SSL certificate and answer the
   following questions:

   a. Is your browser returning an error for your SSL certificate? Why or why
      not?

[No my SSL is verified and not made from a third party source.]

   b. What is the validity of your certificate (date range)?

[Issued On
Monday, March 14, 2022 at 2:39:55 PM
Expires On
Thursday, March 9, 2023 at 1:39:55 PM]

   c. Do you have an intermediate certificate? If so, what is it?

[*.azurewebsites.net]

   d. Do you have a root certificate? If so, what is it?

[Microsoft Azure TLS Issuing CA 01]

   e. Does your browser have the root certificate in its root store?

[Yes]

   f. List one other root CA in your browser's root store.

```
[SHA-256 With RSA Encryption]
```

Cloud Security Questions

1. What are the similarities and differences between Azure Web Application Gateway and Azure Front Door?

```
[AFD and AWAG are both layer 7 (HTTP/HTTPS) load balancers. The main
difference is the Azure front door load balances regions and the Azure web
application gateway manages traffic within a region.]
```

2. A feature of the Web Application Gateway and Front Door is "SSL Offloading." What is SSL offloading? What are its benefits?

```
[SSL offloading is the process of removing the SSL based encryption from
incoming traffic that a web server receives to relieve it from the
decryption data. A few benefits of SSL offloading are better web server
performance, faster response from the server, enhance the stability of
website. ]
```

3. What OSI layer does a WAF work on?

```
[WAF works on the Application layer. ]
```

4. Select one of the WAF managed rules (e.g., directory traversal, SQL injection, etc.), and define it.

```
[SQL injection- inspects for malicious SQL code.]
```

5. Consider the rule that you selected. Could your website (as it is currently designed) be impacted by this vulnerability if Front Door wasn't enabled? Why or why not?

[Yes because Attackers insert malicious SQL code into the web request in order to do things like modify my database or extract data from it.]

6. Hypothetically, say that you create a custom WAF rule to block all traffic from Canada. Does that mean that anyone who resides in Canada would not be able to access your website? Why or why not?

[Correct. Unless the individual that resides in canada use a vpn that changes their IP to USA or Australia they can access my website.]

7. Include screenshots below to demonstrate that your web app has the following:

a. Azure Front Door enabled

[

Home > App Services > ghostsecurity | Networking >

Azure Front Door ⋯
Microsoft Azure

Azure Front Door

Azure Front Door is a modern cloud CDN service that provides high performance, scalability, and secure experiences for your content, files and global applications. It combines modern CDN technology and intelligent threat protection in a tightly integrated service that's easy to set up, deploy, and manage. Use Front Door with Azure services including App Service, Static Web App, Storage, API Management, Application Gateway, Azure Kubernetes Service, Azure Container Apps, and virtual machines–or combine it with on-premises services for hybrid deployments and smooth cloud migration. Learn more ⬏

✅ Azure Front Door is enabled for your web app. Configure your Front Door at the link below. To remove Front Door from this web app, you must remove app service from the Front Door's origins or the classic Front Door's backend.

Name ↑↓	Type ↑↓	Endpoint name ↑↓	Origin group name ↑↓
project1-FrontDoor	Azure Front Door Premium	Project1-FD-bge4fxb7dxbhabf3.z01...	Red-Team

]

b. A WAF custom rule

[

↓ **DefaultWebAppWaf62e2c22727904abb8ab4873e9ce7a23d** | Custom ...   ☆ ⋯ ✕
Front Door WAF policy

🔍 Search   «

Overview

📋 Activity log

👥 Access control (IAM)

🏷 Tags

Settings

⚙ Policy settings

📊 Managed rules

📋 Custom rules

📑 Associations

📊 Properties

🔒 Locks

Automation

🔧 Tasks (preview)

💾 Save   ✕ Discard   ↻ Refresh

ℹ There are pending changes, click 'Save' to apply.

Configure a policy with custom-authored rules. Once a rule is matched, the corresponding action defined in the rule is applied to the request. Once such a match is processed, rules with lower priorities are not processed further. A smaller integer value for a rule denotes a higher priority. Learn more ↗

➕ Add custom rule

Priority	Name	Rule type	Action	Status
100	Project1rule	Match	⊘ Block	✅ Enabled

Home > ghostsecurity

🌐 **ghostsecurity** | Custom domains   ⋯
App Service

🔍 Search   «

🏠 Overview

📋 Activity log

👥 Access control (IAM)

🏷 Tags

🔧 Diagnose and solve problems

🛡 Microsoft Defender for Cloud

⚡ Events (preview)

Deployment

🚀 Quickstart

📊 Deployment slots

📦 Deployment Center

Settings

📊 Configuration

👤 Authentication

💡 Application Insights

🔑 Identity

↻ Refresh   🔧 Troubleshoot   ❓ FAQs

🔵 A new Custom domains (preview) blade is now available. Click here to try the new experience. →

🌐 **Custom Domains**

Configure and manage custom domains assigned to your app. Learn more

IP address: ⓘ
20.211.64.13

Custom Domain Verification ID: ⓘ
1F6D38BB57F71D6144B3416F9EB3A0A84AD456D1314ECE1271312E25453B7A1E

HTTPS Only: ⓘ
🔵 On

➕ Add custom domain

Status Filter
[All (1)] Not Secure (0) Secure (1)

SSL STATE	ASSIGNED CUSTOM DOMAINS	SSL Binding
✅ Secure	ghostsecurity.azurewebsites.net	

⚠ This subscription is not eligible to purchase App Service Domains