| Cybersecurity |
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| Project 1 Technical Brief |

Make a copy of this document before you begin. Place your answers below   
each question. This completed document will be your deliverable for Project 1. Submit it through Canvas when you’re finished with the project at the end of the week.

## Your Web Application

Enter the URL for the web application that you created:

| https://eternalblog.azurewebsites.net/ |
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Paste screenshots of your website created (Be sure to include your blog posts):

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## Day 1 Questions

### General Questions

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

| Azure, as the instructions showed. |
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1. What is your domain name?

| azurewebsite.net |
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### Networking Questions

1. What is the IP address of your webpage?

| 20.119.8.24 |
| --- |

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

| Washington, Virginia, US |
| --- |

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

| No record found |
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### 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?

| PHP 7.4 |
| --- |

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

| The images and formatting for the images. |
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1. Consider your response to the above question. Does this work with the front end or back end?

| Front End |
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## Day 2 Questions

### Cloud Questions

1. What is a cloud tenant?

| A customer who purchases cloud computing resources |
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1. Why would an access policy be important on a key vault?

| Determines access authority to Key Vault secrets, keys, and certificates. |
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1. Within the key vault, what are the differences between keys, secrets, and certificates?

| Keys are asymmetric algorithms, Certificate is used to bind a name to a public key, and Secrets are anything sensitive that isn’t an asymmetric key or a certificate. |
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### Cryptography Questions

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

| Free, used for internal network websites and dev/testing environments, has the same encryption and decryption ciphers as paid SSL certs. |
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1. What are the disadvantages of a self-signed certificate?

| Browsers and Operating Systems do not trust self-signed certificates and are prone to man-in-the-middle attacks. |
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1. What is a wildcard certificate?

| Has \* in the domain name field. |
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1. 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.

| Microsoft disabled SSL 3.0 due to vulnerabilities. |
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1. After completing the Day 2 activities, view your SSL certificate and answer the following questions:
   1. Is your browser returning an error for your SSL certificate? Why or why not?

| No, because the SSL cert was provided by Azure. |
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* 1. What is the validity of your certificate (date range)?

| 3/14/22 - 3/9/2023 |
| --- |

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

| Microsoft Azure TLS Issuing CA 01 |
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* 1. Do you have a root certificate? If so, what is it?

| DigiCert Global Root G2 |
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* 1. Does your browser have the root certificate in its root store?

| Yes. |
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* 1. List one other root CA in your browser’s root store.

| Entrust Root Certification Authority - G2 |
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## Day 3 Questions

### Cloud Security Questions

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

| Both reside in front of the web application, they work on application layer, primary solution is load balancer, use WAF, and have additional features like URL path-based routing and SSL/TLS termination.  The Web Application Gateway is more regional to protect a web application in a single region in your cloud.  The Azure Front Door is more global and is better suited when you have a variety of regions in a cloud environment. |
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1. 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 decryption of data. SSL offloading relieves a web server of the processing burden of encrypting and decrypting traffic sent via SSL. |
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1. What OSI layer does a WAF work on?

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

| SQL Injection for WAF rules is a SQL match condition that specifies the web request portion that you want to verify with WAF, such as the Address or the query string. |
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1. 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?

| Absolutely. There would be no defense against Address or query string manipulations. |
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1. 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?

| No, a Canadian resident could use a VPN to act like they are in the US. |
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1. Include screenshots below to demonstrate that your web app has the following:
   1. Azure Front Door enabled

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* 1. A WAF custom rule

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## Disclaimer on Future Charges

Please type “**YES**” after one of the following options:

* ***Maintaining website after project conclusion****: I am aware that I am responsible for any charges that I incur by maintaining my website. I have reviewed the* [*guidance*](https://docs.google.com/document/d/1ZzC4oTJFdlkkeWuzuJAyVSqtDFbuAWilmwXg8PZgzMs/edit) *for minimizing costs and monitoring Azure charges.*
* ***Disabling website after project conclusion****: I am aware that I am responsible for deleting all of my project resources as soon as I have gathered all of my web application screen shots and completed this document. YES*

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