



**Due Date: Monday, 28<sup>th</sup> of October 2024**

### Question-1 [10 marks]

Describe difference between SDLC models (Waterfall, Agile, Spiral, DevOps) in your own words with examples. Marks would be given based on knowledge, representation and **to specific examples to illustrate the comparison.**

### Question-2 [24 marks]

Because jotting down information enhances your ability to remember it, furnish clear and concise definitions for the following terms each *in ten words or less*: (a) Risk (b) Threat (c) Defect (d) Flaw (e) Bug (f) Vulnerability (g) Weakness (h) Failure (i) Exploit (j) Integrity (k) Authentication (l) Authorization. The effort put into composing short definitions should increase your fluency with the terminology. Craft the answers yourself rather than getting a chatbot to do your work. For each definition, 2 points, all or nothing. Your writing must be accurate, precise, and grammatically correct. You must limit definitions to ten words

### Question-3 [15 marks]

Use Gripe and Docker, do vulnerability analysis of any available docker image.

Run `gripe docker:webgoat/webgoat-8.0:latest`

1. Report results in csv and json format
2. Pick any five HIGH CVE vulnerabilities, search CVE number (like CVE-2022-1271) here at <https://www.cve.org> and comment on the vulnerability

### Question-4 [11 marks]

Use Gripe and Docker, do vulnerability analysis of any available docker image.

Run `gripe docker:mysql`

1. Explain all HIGH vulnerabilities

Run `gripe docker:debian:latest`

1. How many vulnerabilities? If not any, any reason or comment

### Question-5 [20 marks]

- Complete your discussions from week-1 to week-6. Add screenshots of your discussions here.
- Read discussions of your classmates and provide screenshots of any five discussions that you find interesting along with your reasons.

**Question-6 [20 marks]**

## Footprinting through Search Engine

- Type on any browser **intitle:password site:www.universityofgalway** and press Enter. What type of results are you getting?
- Whats about this search? **filetype:pdf site:www.universityofgalway.ie** Any benefit?

Apart from the aforementioned advanced Google operators, you can also use the following to perform an advanced search to gather more information about the target organization from publicly available sources.

- **cache:** This operator allows you to view cached version of the web page.  
[cache: www.google.com]-Query returns the cached version of the website [www.google.com](http://www.google.com)
- **allinurl:** This operator restricts results to pages containing all the query terms specified in the URL. [allinurl: google career]—Query returns only pages containing the words “google” and “career” in the URL
- **inurl:** This operator restricts the results to pages containing the word specified in the URL [inurl: copy site:www.google.com]—Query returns only pages in Google site in which the URL has the word “copy”
- **allintitle:** This operator restricts results to pages containing all the query terms specified in the title.  
[allintitle: detect malware]—Query returns only pages containing the words “detect” and “malware” in the title
- **inanchor:** This operator restricts results to pages containing the query terms specified in the anchor text on links to the page.  
[Anti-virus inanchor:Norton]—Query returns only pages with anchor text on links to the pages containing the word “Norton” and the page containing the word “Anti-virus”
- **allinanchor:** This operator restricts results to pages containing all query terms specified in the anchor text on links to the page.  
[allinanchor: best cloud service provider]—Query returns only pages in which the anchor text on links to the pages contain the words “best,” “cloud,” “service,” and “provider”
- **link:** This operator searches websites or pages that contain links to the specified website or page.  
[link:www.googleguide.com]—Finds pages that point to Google Guide’s home page
- **related:** This operator displays websites that are similar or related to the URL specified.  
[related:www.certifiedhacker.com]—Query provides the Google search engine results page with websites similar to certifiedhacker.com

**Note for all questions: Simply executing software or commands and displaying results will not earn full credit. You must also provide an analysis or commentary on the results obtained.**