Module 2 Cheat Sheet: Security Testing and Mitigation Strategies

Package/Method	**Description**	**Code Example**

bash	Bash, or the Bourne Again Shell command, is a command-line interpreter commonly used in Unix-based operating systems. It runs in a text window where the user can interpret commands to carry out various actions.	Example: This generates a list of numbers and prints them:
		`#!/bin/bash`
		`# Loop from 1 to 3 and print the numbers`
		`for i in {1..3}; do`
		`   echo "Number: $i"`
		`done`

alias	Lets you create a shortcut name for a command, file name, or any shell text. Using aliases saves a lot of time when performing frequent tasks.	Basic syntax of `alias` command
		`alias [new-name[=command]`
		Example 1: Replaces command `cd C:\Users\Videos` with new alias `cdv`; so instead of typing `cd C:\Users\Videos`, one can type `cdv` to execute the same command
		`alias cdv="cd C:\Users\Videos"`
		`cdv`
		Example 2: Use `-p` option to view all your alias commands
		`alias -p`
		Example 3: Use unalias with `-a` option to remove all your alias commands
		`unalias -a`
		Example 4: Use unalias command with name of alias on to remove specific alias command
		`unalias cdv`

cd	Used to move efficiently from the existing working directory to different directories on your system.	Basic syntax of `cd` command
		`cd [options] [directory]`
		Example 1: Change directory location to `folder1`
		`cd /usr/local/folder1`
		Example 2: Get back to previous working directory
		`cd -`

		Example 3: Move up one level from present working directory tree `cd ..`

dependency-check	OWASP dependency-check is a software composition analysis utility that detects publicly disclosed vulnerabilities in application dependencies.	Basic syntax of `dependency-check` command
		`dependency-check.bat [options] --scan[directory] --out [directory]`
		`` `Options ``
		`project: The name of your project as it should appear in the report`
		`scan [directory]: The folder which contains the 3rd party dependency libraries`
		`` out [directory]: The folder where the vulnerability analysis reports should be exported to` ``
		Example 1: In `Windows`, use command as given below
		`dependency-check.bat --project "my_project" --scan "c:\java\application\lib"`
		Example 2: In `Linux`, use command as given below
		`dependency-check.sh --project "my_project" --scan "/java/application/lib"`

docker network	You can use this code to manage networks. The subcommands can be used to create, inspect, list, remove, prune, connect, and disconnect networks.	Create a `docker network`
		`docker network create my_network`
		Verify Network Connection
		`docker network inspect my_network`
		List docker Network
		`docker network ls`
		Remove docker network
		`docker network rm NETWORK_NAME_OR_ID`
		Prune docker network
		`docker network prune`
		Connect Docker Network
		`docker network connect NETWORK_NAME CONTAINER_NAME_OR_ID`

		Disconnect Docker Network `docker network disconnect NETWORK_NAME CONTAINER_NAME_OR_ID`

docker ps	Lists the running containers by default. We can use different flags to get the list of other containers that are in stopped or exited status.	`docker ps [OPTIONS]`
		If you want to see all containers, including the stopped ones, you can use the `-a` or `-all`
		`docker ps -a`

docker pull	You can download Docker images from the internet.	`docker pull [OPTIONS] IMAGE_NAME[:TAG]`
docker run	It runs a command in a new container, getting the image and starting the container if needed.	`docker run [OPTIONS] IMAGE [COMMAND] [ARG...]`
git clone	You can create a copy of a specific repository or branch within a repository.	`git clone REPOSITORY_URL [DESTINATION_DIRECTORY]`
jake	Jake is a simple JavaScript build program with capabilities similar to the regular make or rake command. It has the following features: Jakefiles are in standard JavaScript syntax Tasks with prerequisites Namespaces for tasks Async task execution	`jake ddt`

jq	Used to transform JSON data into a more readable format and print it to the standard output on Linux.	Basic command syntax
		`jq [options] [filter] [file]`
		Let's consider a simple `example.json` file that describes an array as below -
		`[`
		`    {`
		`        color: "red",`
		`        value: "#f00"`
		`    },`
		`    {`
		`        color: "green",`
		`        value: "#0f0"`
		`    },`
		`    {`
		`        color: "blue",`
		`        value: "#00f"`
		`    }`
		`]`
		Example 1: The identity filter `.` takes the input and produces prints all output unchanged

		`jq '.' example.json`
		Example 2: Extract the name of each color from each object in the array
		`jq '.[].color' example.json`
		`jq 'map(has("color"))' example.json`

ls	Basic Linux command used for listing information regarding files and directories within the file system.	Basic command syntax
		`ls [options] [file/directory]`
		Example 1: Sorts the file names displayed in the order of last modification time. `r` is for displaying in reverse order
		`ls -lt`
		`ls -ltr`
		Example 2: Displays hidden files
		`ls -a`

pip	To ensure that requests will function, the pip program searches for the package in the Python Package Index (PyPI), resolves any dependencies and installs everything in your current Python environment.	`pip list`
pip install	The pip install <package> command looks for the latest version of the package and installs it.	`pip install example_package`

sonar-scanner	The SonarScanner CLI is the scanner to use when there is no specific scanner for your build system.	Basic Syntax of the sonar-scanner command; commonly used options are:
		`-D,--define <arg> Define property`
		`-h,--help Display help information`
		`-v,--version Display version information`
		`-X,--debug Produce execution debug output`
		`sonar-scanner [options]`
		Example: verify your installation by executing the command
		`sonar-scanner -h`

wget	Stands for web get. The `wget` is a free non-interactive file downloader command. Non-interactive means it can work in the background when the user is not logged in.	Basic Syntax of the wget command; commonly used options are `[-V]`, `[-h]`, `[-b]`, `[-e]`, `[-o]`, `[-a]`, `[-q]` `wget [options]`

		Example 1: Specifies to `download file.txt` over HTTP website url into the working directory.
		`wget http://example.com/file.txt`
		Example 2: Specifies to download the `archive.zip` over HTTP website url in the background and returning you to the command prompt in the interim.
		`wget -b http://www.example.org/files/archive.zip`

which	Used to locate the executable file associated with the given command by searching it in the path environment variable	Basic syntax of `which` command
		`which [option] [filename1] [filename2]`
		Example 1: To know where exactly the java program is located, execute the command as below
		`which java`
		Example 2: To know exact location of multiple programs, execute the command as below
		`which java python`
		Example 3: By default which command will display the path of the first occurrence, but if we want to display all the occurrences of the program, then we can use `-a` option.
		`which -a python`

Skills Network