# Unit 15 Homework

### Web Application 1: *Your Wish is My Command Injection*

1. ScreenShots
   * /etc/passwd

Text

Description automatically generated

* + /etc/hosts

Text

Description automatically generated

1. **Mitigation strategies**

There are three main ways you can mitigate command injection.

* 1. Avoid executing OS commands and use APIs provided by the framework or the language.
  2. Use input validation, so that commands are not passed to the backend
  3. Escaping shell metacharacters can be used to prevent command execution vulnerabilities

### Web Application 2: *A Brute Force to Be Reckoned With*

1. **Screenshot:**

Graphical user interface, table

Description automatically generated

1. **Mitigation:**
   1. Require complex usernames and passwords:

For example, require the user to include special characters, upper and lowercase, and numbers in the username and password.

* 1. Lock out accounts after a number of failed attempts:

For example, after three failed login attempts, the user's account gets locked.

* 1. Use multi-factor authentication (MFA):

For example, require users to have a password and a secondary form of authentication, like a pin generated by an external token.

### Web Application 3: *Where’s the BeEF?*

Social Engineering >> Pretty Theft

Graphical user interface, application

Description automatically generated

Social Engineering >> Fake Notification Bar

Host >> Get Geolocation (Third Party)

1. **Screenshots:**
   1. Social Engineering >> Pretty Theft

Graphical user interface, application

Description automatically generated

* 1. Social Engineering >> Fake Notification Bar

Graphical user interface

Description automatically generated

* 1. Host >> Get Geolocation (Third Party)

Graphical user interface, text, application, email

Description automatically generated

1. **Mitigation:**
   1. Keep the system up to date with the latest patches
   2. Restore the VM to its original state on a regular basis (once a week, or once a month).
   3. Rotate passwords regularly.

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