# CS 305 Project One Template

## Document Revision History

| **Version** | **Date** | **Author** | **Comments** |
| --- | --- | --- | --- |
| **1.0** | **11/13/2024** | **Jennifer Geurian** |  |

## Client



## Instructions

Submit this completed vulnerability assessment report. Replace the bracketed text with the relevant information. In this report, identify your security vulnerability findings and recommend the next steps to remedy the issues you have found.

* Respond to the five steps outlined below and include your findings.
* Respond using your own words. You may also include images or supporting materials. If you include them, make certain to insert them in the relevant locations in the document.
* Refer to the Project One Guidelines and Rubric for more detailed instructions about each section of the template.

## Developer

[Insert your name here.]

**1. Interpreting Client Needs**

Determine your client’s needs and potential threats and attacks associated with the company’s application and software security requirements. Consider the following questions regarding how companies protect against external threats based on the scenario information:

* What is the value of secure communications to the company?
* Are there any international transactions that the company produces?
* Are there governmental restrictions on secure communications to consider?
* What external threats might be present now and in the immediate future?
* What modernization requirements must be considered, such as the role of open-source libraries and evolving web application technologies?

Secure communication becomes a requirement for any business that handles sensitive customer information including, but not limited to, financial information and customer or employee contact information. Secure communication is a preventative for data breaches and allows the company to maintain the trust of clients and employees alike.

International transactions have stricter security requirements. In order for the company to engage in transactions internationally, they must adhere to global security standards and the related encryption protocols that offer enhanced security for cross-border data transfer.

There are several ways governmental restrictions can come into play. For software that will be used by companies in the healthcare industry, all software must be HIPAA compliant. For software used in the education sector, it must be FERPA compliant. Knowing the industry the software will be used in is a great start to knowing what governmental restrictions will be placed on the software and is a step in ensuring the software meets the requirements.

There are always going to be external threats to almost any software. Phishing, hacking, and malware are just a few of the possibilities when it comes to external threats, and in most cases, it is equally up to both the end users and those who are building and designing the software to avoid these types of attacks. No matter how good the software is built, if the end user is giving out all the information necessary to access their account in a phishing scam, then security is still compromised to some extent.

As far as modernization requirements, the last three decades of technology has proven that the industry can change seemingly overnight and if a company isn’t prepared, they can be left behind with software that is still being developed already being obsolete. This is why the Agile process was developed, and DevSecOps has become a further extension of that process building in security as the product is being built. This helps to keep all aspects of the product as up to date with new and changing technologies and security protocols as possible. This is going to be essential as the development of AI improves and accelerates in coming years.

**2. Areas of Security**

Refer to the vulnerability assessment process flow diagram. Identify which areas of security apply to Artemis Financial’s software application. Justify your reasoning for why each area is relevant to the software application.

Input validation and data encryption are relevant areas of security for Artemis Financial. Input validation is necessary to prevent user input from being the source of a security breach. Data encryption prevents data from being intercepted during transfer when it is vulnerable to outside interception.

**3. Manual Review**

Continue working through the vulnerability assessment process flow diagram. Identify all vulnerabilities in the code base by manually inspecting the code.

[Include your 7–10 findings here.]

* Input validation needs to be incorporated for the SQL input being received.
* Ensure secure API interactions between the SQL application and Artemis’ application.
* Encrypt customer information as it is being transferred to prevent security breaches.
* Shuffle information as it is being processed to prevent an outside entity from accessing information that can be used to breach the security of the system.
* Implement error handling DocData has a catch exception for the SQL database, but there aren’t other secure error handling processes where there need to be such as from invalid input.
* Session management could be implemented as a form of secure coding practices.
* Make access to customer information specific to only the processes and methods that require access to it, and only allow the processes and methods that need to change that information access to the ability to change it.

**4. Static Testing**

Run a dependency check on Artemis Financial’s software application to identify all security vulnerabilities in the code. Record the output from the dependency-check report. Include the following items:

* The names or vulnerability codes of the known vulnerabilities
* A brief description and recommended solutions provided by the dependency-check report
* Any attribution that documents how this vulnerability has been identified or documented previously

**bcprov-jdk15on-1.46.jar**

Description:

The Bouncy Castle Crypto package is a Java implementation of cryptographic algorithms. This jar contains JCE provider and lightweight API for the Bouncy Castle Cryptography APIs for JDK 1.5 to JDK 1.7.

Identifiers

* [pkg:maven/org.bouncycastle/bcprov-jdk15on@1.46](https://ossindex.sonatype.org/component/pkg:maven/org.bouncycastle/bcprov-jdk15on@1.46?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* cpe:2.3:a:bouncycastle:bouncy-castle-crypto-package:1.46:\*:\*:\*:\*:\*:\*:\*  (*Confidence*:Low)  suppress
* cpe:2.3:a:bouncycastle:bouncy\_castle\_crypto\_package:1.46:\*:\*:\*:\*:\*:\*:\*  (*Confidence*:Low)  suppress
* [cpe:2.3:a:bouncycastle:bouncy\_castle\_for\_java:1.46:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Abouncycastle&cpe_product=cpe%3A%2F%3Abouncycastle%3Abouncy_castle_for_java&cpe_version=cpe%3A%2F%3Abouncycastle%3Abouncy_castle_for_java%3A1.46)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:bouncycastle:legion-of-the-bouncy-castle-java-crytography-api:1.46:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Abouncycastle&cpe_product=cpe%3A%2F%3Abouncycastle%3Alegion-of-the-bouncy-castle-java-crytography-api&cpe_version=cpe%3A%2F%3Abouncycastle%3Alegion-of-the-bouncy-castle-java-crytography-api%3A1.46)  (*Confidence*:Highest)  suppress
* cpe:2.3:a:bouncycastle:the\_bouncy\_castle\_crypto\_package\_for\_java:1.46:\*:\*:\*:\*:\*:\*:\*  (*Confidence*:Low)  suppress

**classmate-1.5.1.jar**

Description:

Library for introspecting types with full generic information

including resolving of field and method types.

Identifiers

* [pkg:maven/com.fasterxml/classmate@1.5.1](https://ossindex.sonatype.org/component/pkg:maven/com.fasterxml/classmate@1.5.1?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

hibernate-validator-6.0.18.Final.jar

Description:

Hibernate's Bean Validation (JSR-380) reference implementation.

Identifiers

* [pkg:maven/org.hibernate.validator/hibernate-validator@6.0.18.Final](https://ossindex.sonatype.org/component/pkg:maven/org.hibernate.validator/hibernate-validator@6.0.18.Final?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:redhat:hibernate\_validator:6.0.18:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aredhat&cpe_product=cpe%3A%2F%3Aredhat%3Ahibernate_validator&cpe_version=cpe%3A%2F%3Aredhat%3Ahibernate_validator%3A6.0.18)  (*Confidence*:Highest)  suppress

**jackson-core-2.10.2.jar**

Description:

Core Jackson processing abstractions (aka Streaming API), implementation for JSON

Identifiers

* [pkg:maven/com.fasterxml.jackson.core/jackson-core@2.10.2](https://ossindex.sonatype.org/component/pkg:maven/com.fasterxml.jackson.core/jackson-core@2.10.2?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* cpe:2.3:a:fasterxml:jackson-modules-java8:2.10.2:\*:\*:\*:\*:\*:\*:\*  (*Confidence*:Low)  suppress

jackson-databind-2.10.2.jar

Description:

General data-binding functionality for Jackson: works on core streaming API

Identifiers

* [pkg:maven/com.fasterxml.jackson.core/jackson-databind@2.10.2](https://ossindex.sonatype.org/component/pkg:maven/com.fasterxml.jackson.core/jackson-databind@2.10.2?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:fasterxml:jackson-databind:2.10.2:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Afasterxml&cpe_product=cpe%3A%2F%3Afasterxml%3Ajackson-databind&cpe_version=cpe%3A%2F%3Afasterxml%3Ajackson-databind%3A2.10.2)  (*Confidence*:Highest)  suppress
* cpe:2.3:a:fasterxml:jackson-modules-java8:2.10.2:\*:\*:\*:\*:\*:\*:\*  (*Confidence*:Low)  suppress

**jakarta.annotation-api-1.3.5.jar**

Description:

Jakarta Annotations API

Identifiers

* [pkg:maven/jakarta.annotation/jakarta.annotation-api@1.3.5](https://ossindex.sonatype.org/component/pkg:maven/jakarta.annotation/jakarta.annotation-api@1.3.5?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* cpe:2.3:a:oracle:projects:1.3.5:\*:\*:\*:\*:\*:\*:\*  (*Confidence*:Low)  suppress

**jakarta.validation-api-2.0.2.jar**

Description:

Jakarta Bean Validation API

Identifiers

* [pkg:maven/jakarta.validation/jakarta.validation-api@2.0.2](https://ossindex.sonatype.org/component/pkg:maven/jakarta.validation/jakarta.validation-api@2.0.2?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

**jboss-logging-3.4.1.Final.jar**

Description:

The JBoss Logging Framework

Identifiers

* [pkg:maven/org.jboss.logging/jboss-logging@3.4.1.Final](https://ossindex.sonatype.org/component/pkg:maven/org.jboss.logging/jboss-logging@3.4.1.Final?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

**jul-to-slf4j-1.7.30.jar**

Description:

JUL to SLF4J bridge

Identifiers

* [pkg:maven/org.slf4j/jul-to-slf4j@1.7.30](https://ossindex.sonatype.org/component/pkg:maven/org.slf4j/jul-to-slf4j@1.7.30?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

**log4j-api-2.12.1.jar**

Description:

The Apache Log4j API

Identifiers

* [pkg:maven/org.apache.logging.log4j/log4j-api@2.12.1](https://ossindex.sonatype.org/component/pkg:maven/org.apache.logging.log4j/log4j-api@2.12.1?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:apache:log4j:2.12.1:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aapache&cpe_product=cpe%3A%2F%3Aapache%3Alog4j&cpe_version=cpe%3A%2F%3Aapache%3Alog4j%3A2.12.1)  (*Confidence*:Highest)  suppress

**log4j-to-slf4j-2.12.1.jar**

Description:

The Apache Log4j binding between Log4j 2 API and SLF4J.

Identifiers

* [pkg:maven/org.apache.logging.log4j/log4j-to-slf4j@2.12.1](https://ossindex.sonatype.org/component/pkg:maven/org.apache.logging.log4j/log4j-to-slf4j@2.12.1?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

**logback-core-1.2.3.jar**

Description:

logback-core module

Related Dependencies

Identifiers

* [pkg:maven/ch.qos.logback/logback-core@1.2.3](https://ossindex.sonatype.org/component/pkg:maven/ch.qos.logback/logback-core@1.2.3?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:qos:logback:1.2.3:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aqos&cpe_product=cpe%3A%2F%3Aqos%3Alogback&cpe_version=cpe%3A%2F%3Aqos%3Alogback%3A1.2.3)  (*Confidence*:Highest)  suppress

**slf4j-api-1.7.30.jar**

Description:

The slf4j API

Identifiers

* [pkg:maven/org.slf4j/slf4j-api@1.7.30](https://ossindex.sonatype.org/component/pkg:maven/org.slf4j/slf4j-api@1.7.30?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

**snakeyaml-1.25.jar**

Description:

YAML 1.1 parser and emitter for Java

Identifiers

* [pkg:maven/org.yaml/snakeyaml@1.25](https://ossindex.sonatype.org/component/pkg:maven/org.yaml/snakeyaml@1.25?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:snakeyaml\_project:snakeyaml:1.25:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Asnakeyaml_project&cpe_product=cpe%3A%2F%3Asnakeyaml_project%3Asnakeyaml&cpe_version=cpe%3A%2F%3Asnakeyaml_project%3Asnakeyaml%3A1.25)  (*Confidence*:Highest)  suppress

**spring-boot-2.2.4.RELEASE.jar**

Description:

Spring Boot

Identifiers

* [pkg:maven/org.springframework.boot/spring-boot@2.2.4.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework.boot/spring-boot@2.2.4.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:vmware:spring\_boot:2.2.4:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Avmware&cpe_product=cpe%3A%2F%3Avmware%3Aspring_boot&cpe_version=cpe%3A%2F%3Avmware%3Aspring_boot%3A2.2.4)  (*Confidence*:Highest)  suppress

**spring-boot-starter-web-2.2.4.RELEASE.jar**

Description:

Starter for building web, including RESTful, applications using Spring

MVC. Uses Tomcat as the default embedded container

Identifiers

* [pkg:maven/org.springframework.boot/spring-boot-starter-web@2.2.4.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework.boot/spring-boot-starter-web@2.2.4.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:vmware:spring\_boot:2.2.4:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Avmware&cpe_product=cpe%3A%2F%3Avmware%3Aspring_boot&cpe_version=cpe%3A%2F%3Avmware%3Aspring_boot%3A2.2.4)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:web\_project:web:2.2.4:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aweb_project&cpe_product=cpe%3A%2F%3Aweb_project%3Aweb&cpe_version=cpe%3A%2F%3Aweb_project%3Aweb%3A2.2.4)  (*Confidence*:Highest)  suppress

**spring-core-5.2.3.RELEASE.jar**

Description:

Spring Core

Identifiers

* [pkg:maven/org.springframework/spring-core@5.2.3.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework/spring-core@5.2.3.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:pivotal\_software:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Apivotal_software&cpe_product=cpe%3A%2F%3Apivotal_software%3Aspring_framework&cpe_version=cpe%3A%2F%3Apivotal_software%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:springsource:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aspringsource&cpe_product=cpe%3A%2F%3Aspringsource%3Aspring_framework&cpe_version=cpe%3A%2F%3Aspringsource%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:vmware:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Avmware&cpe_product=cpe%3A%2F%3Avmware%3Aspring_framework&cpe_version=cpe%3A%2F%3Avmware%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress

**spring-expression-5.2.3.RELEASE.jar**

Description:

Spring Expression Language (SpEL)

Identifiers

* [pkg:maven/org.springframework/spring-expression@5.2.3.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework/spring-expression@5.2.3.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:pivotal\_software:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Apivotal_software&cpe_product=cpe%3A%2F%3Apivotal_software%3Aspring_framework&cpe_version=cpe%3A%2F%3Apivotal_software%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:springsource:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aspringsource&cpe_product=cpe%3A%2F%3Aspringsource%3Aspring_framework&cpe_version=cpe%3A%2F%3Aspringsource%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:vmware:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Avmware&cpe_product=cpe%3A%2F%3Avmware%3Aspring_framework&cpe_version=cpe%3A%2F%3Avmware%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress

**spring-web-5.2.3.RELEASE.jar**

Description:

Spring Web

Identifiers

* [pkg:maven/org.springframework/spring-web@5.2.3.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework/spring-web@5.2.3.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:pivotal\_software:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Apivotal_software&cpe_product=cpe%3A%2F%3Apivotal_software%3Aspring_framework&cpe_version=cpe%3A%2F%3Apivotal_software%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:springsource:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aspringsource&cpe_product=cpe%3A%2F%3Aspringsource%3Aspring_framework&cpe_version=cpe%3A%2F%3Aspringsource%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:vmware:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Avmware&cpe_product=cpe%3A%2F%3Avmware%3Aspring_framework&cpe_version=cpe%3A%2F%3Avmware%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:web\_project:web:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aweb_project&cpe_product=cpe%3A%2F%3Aweb_project%3Aweb&cpe_version=cpe%3A%2F%3Aweb_project%3Aweb%3A5.2.3)  (*Confidence*:Highest)  suppress

**spring-webmvc-5.2.3.RELEASE.jar**

Description:

Spring Web MVC

Identifiers

* [pkg:maven/org.springframework/spring-webmvc@5.2.3.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework/spring-webmvc@5.2.3.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:pivotal\_software:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Apivotal_software&cpe_product=cpe%3A%2F%3Apivotal_software%3Aspring_framework&cpe_version=cpe%3A%2F%3Apivotal_software%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:springsource:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aspringsource&cpe_product=cpe%3A%2F%3Aspringsource%3Aspring_framework&cpe_version=cpe%3A%2F%3Aspringsource%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:vmware:spring\_framework:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Avmware&cpe_product=cpe%3A%2F%3Avmware%3Aspring_framework&cpe_version=cpe%3A%2F%3Avmware%3Aspring_framework%3A5.2.3)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:web\_project:web:5.2.3:release:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aweb_project&cpe_product=cpe%3A%2F%3Aweb_project%3Aweb&cpe_version=cpe%3A%2F%3Aweb_project%3Aweb%3A5.2.3)  (*Confidence*:Highest)  suppress

**tomcat-embed-core-9.0.30.jar**

Description:

Core Tomcat implementation

Identifiers

* [pkg:maven/org.apache.tomcat.embed/tomcat-embed-core@9.0.30](https://ossindex.sonatype.org/component/pkg:maven/org.apache.tomcat.embed/tomcat-embed-core@9.0.30?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:apache:tomcat:9.0.30:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aapache&cpe_product=cpe%3A%2F%3Aapache%3Atomcat&cpe_version=cpe%3A%2F%3Aapache%3Atomcat%3A9.0.30)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:apache\_tomcat:apache\_tomcat:9.0.30:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aapache_tomcat&cpe_product=cpe%3A%2F%3Aapache_tomcat%3Aapache_tomcat&cpe_version=cpe%3A%2F%3Aapache_tomcat%3Aapache_tomcat%3A9.0.30)  (*Confidence*:Highest)  suppress

**tomcat-embed-el-9.0.30.jar**

Description:

Core Tomcat implementation

Identifiers

* [pkg:maven/org.apache.tomcat.embed/tomcat-embed-el@9.0.30](https://ossindex.sonatype.org/component/pkg:maven/org.apache.tomcat.embed/tomcat-embed-el@9.0.30?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)

**tomcat-embed-websocket-9.0.30.jar**

Description:

Core Tomcat implementation

Identifiers

* [pkg:maven/org.apache.tomcat.embed/tomcat-embed-websocket@9.0.30](https://ossindex.sonatype.org/component/pkg:maven/org.apache.tomcat.embed/tomcat-embed-websocket@9.0.30?utm_source=dependency-check&utm_medium=integration&utm_content=11.1.0)  (*Confidence*:High)
* [cpe:2.3:a:apache:tomcat:9.0.30:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aapache&cpe_product=cpe%3A%2F%3Aapache%3Atomcat&cpe_version=cpe%3A%2F%3Aapache%3Atomcat%3A9.0.30)  (*Confidence*:Highest)  suppress
* [cpe:2.3:a:apache\_tomcat:apache\_tomcat:9.0.30:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Aapache_tomcat&cpe_product=cpe%3A%2F%3Aapache_tomcat%3Aapache_tomcat&cpe_version=cpe%3A%2F%3Aapache_tomcat%3Aapache_tomcat%3A9.0.30)  (*Confidence*:Highest)  suppress

**5. Mitigation Plan**

Interpret the results from the manual review and static testing report. Then identify the steps to mitigate the identified security vulnerabilities for Artemis Financial’s software application.

Most of the vulnerabilities listed are either API related or within libraries that are used. Taking time to ensure that the API transfers are secure would be the best place to start.