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# Artemis Financial Vulnerability Assessment Report

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## Document Revision History

| **Version** | **Date** | **Author** | **Comments** |
| --- | --- | --- | --- |
| **1.0** | **[Date]** | **[Your name]** |  |

## Client



## Instructions

Submit this completed vulnerability assessment report. Replace the bracketed text with the relevant information. In the report, identify your findings of security vulnerabilities and provide recommendations for 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 choose to include images or supporting materials. If you include them, make certain to insert them in all 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

Jon Way

## Interpreting Client Needs

* Company handles important financial info
* Personal information for all clients
* Financial information for all clients, including savings, retirement, investments, and insurance
* Losing trust due to a cyberattack could lead to losing customers, financial ruin for company for making up costs on customers behalf
* Must consider government secure communication restrictions
* Potential for international customers – must include international governments’ restrictions
* External threats include attempts to access client financial and personal information

## Areas of Security

* **Input Validation**: including various checks throughout the program to make sure the information being sent and received is correct to what is expected and to make sure the information is coming from and being sent to the correct recipients
* **APIs**: It is vital that the company have well designed APIs so that the interaction between programs and databases necessary for the information used in this field are accurate and secure
* **Cryptography**: possibly the most important area for this company, it is incredibly important that the personal information stored for clients is heavily encrypted and thus harder for unauthorized people to access
* **Code Quality**: having well written code will help maintain the security of the program, and thus will reduce the risk of attacks

## Manual Review

* Incorporate input validation in CRUDcontroller, DocData, GreetingController, and elsewhere as deemed necessary
* No evidence of encrypting client information
* Out of date Spring Framework

## Static Testing

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| [bcprov-jdk15on-1.46.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l2_991c96a4e31e6c19e2b9136c8955bd423f2dc4c7) | [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) | [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=5.3.0) | HIGH | 16 | Highest | 37 |
| [spring-boot-2.2.4.RELEASE.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l3_225a4fd31156c254e3bb92adb42ee8c6de812714) | [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) | [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=5.3.0) | HIGH | 1 | Highest | 32 |
| [logback-core-1.2.3.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l4_864344400c3d4d92dfeb0a305dc87d953677c03c) | [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) | [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=5.3.0) | MEDIUM | 1 | Highest | 32 |
| [log4j-api-2.12.1.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l5_a55e6d987f50a515c9260b0451b4fa217dc539cb) | [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) | [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=5.3.0) | CRITICAL | 5 | Highest | 46 |
| [snakeyaml-1.25.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l8_8b6e01ef661d8378ae6dd7b511a7f2a33fae1421) | [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) [cpe:2.3:a:yaml\_project:yaml:1.25:\*:\*:\*:\*:\*:\*:\*](https://nvd.nist.gov/vuln/search/results?form_type=Advanced&results_type=overview&search_type=all&cpe_vendor=cpe%3A%2F%3Ayaml_project&cpe_product=cpe%3A%2F%3Ayaml_project%3Ayaml&cpe_version=cpe%3A%2F%3Ayaml_project%3Ayaml%3A1.25) | [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=5.3.0) | HIGH | 10 | Highest | 28 |
| [jackson-databind-2.10.2.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l9_0528de95f198afafbcfb0c09d2e43b6e0ea663ec) | [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) | [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=5.3.0) | HIGH | 4 | Highest | 39 |
| [tomcat-embed-core-9.0.30.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l13_ad32909314fe2ba02cec036434c0addd19bcc580) | [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) [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) | [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=5.3.0) | CRITICAL | 20 | Highest | 39 |
| [hibernate-validator-6.0.18.Final.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l16_7fd00bcd87e14b6ba66279282ef15efa30dd2492) | [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) | [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=5.3.0) | MEDIUM | 1 | Highest | 36 |
| [spring-web-5.2.3.RELEASE.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l19_dd386a02e40b915ab400a3bf9f586d2dc4c0852c) | [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) [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) | [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=5.3.0) | HIGH | 4 | Highest | 28 |
| [spring-beans-5.2.3.RELEASE.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l20_0250c8c641433dc06b1b44e4563fa08a2fbf8954) | [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) [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) | [pkg:maven/org.springframework/spring-beans@5.2.3.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework/spring-beans@5.2.3.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=5.3.0) | HIGH | 1 | Highest | 28 |
| [spring-webmvc-5.2.3.RELEASE.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l21_745a62502023d2496b565b7fe102bb1ee229d6b7) | [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) [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) | [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=5.3.0) | MEDIUM | 1 | Highest | 30 |
| [spring-context-5.2.3.RELEASE.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l22_7750c95c96c7a1885c8b1b503ba915bc33ca579a) | [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) [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) | [pkg:maven/org.springframework/spring-context@5.2.3.RELEASE](https://ossindex.sonatype.org/component/pkg:maven/org.springframework/spring-context@5.2.3.RELEASE?utm_source=dependency-check&utm_medium=integration&utm_content=5.3.0) | MEDIUM | 1 | Highest | 28 |
| [spring-expression-5.2.3.RELEASE.jar](https://usc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fsnhu-my.sharepoint.com%2Fpersonal%2Fjonathan_way_snhu_edu%2F_vti_bin%2Fwopi.ashx%2Ffiles%2F8970e4f644d5465c855f230533306670&wdorigin=OFFICECOM-WEB.MAIN.UPLOAD&wdenableroaming=1&mscc=1&wdodb=1&hid=48EEA0A0-E032-D000-E440-E5F0FE05AB2E&wdhostclicktime=1679277141421&jsapi=1&jsapiver=v1&newsession=1&corrid=a439416b-a529-4dae-9590-75be8c6bb062&usid=a439416b-a529-4dae-9590-75be8c6bb062&sftc=1&cac=1&mtf=1&sfp=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Normal&ctp=LeastProtected#l23_d0c6bb10758805b2153c589686b8045554bfac2d) | [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) [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) | [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=5.3.0) | MEDIUM | 1 | Highest | 30 |

## Mitigation Plan

Other than adding in the necessary input validation, the biggest issue this program has is that it’s databases, APIs, and other frameworks are outdated and need to be updated. This would be the most important part of mitigation as updating these will help with already known cyberattacks like SQL injections.