

Precise Testing Solution Pvt. Ltd

# Security Testing Report

[www.precisetestingsolution.com](http://www.precisetestingsolution.com)



To,

**Maharashtra Knowledge Corporation Ltd.**

**MKCL Seawood BO, Plot No. 30, Sector 42-A,  
Nerul, Navi Mumbai 400706, Maharashtra,  
INDIA.**

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# Precise Testing Solution Pvt. Ltd (PTS)

Precise Testing **Solution** Pvt. Ltd is a private limited company based in Noida, Uttar Pradesh, India.

Precise Testing **Solution** is working towards becoming a leading quality services provider for Testing and QC/QA for all types of domains and applications.

## Introduction

PTS is committed to deliver best-in-class quality control assurance and software testing **Solutions** to our clients. Using proven testing methodologies and industry's best practices. We help companies to optimize the quality, performance and availability of their applications. The wide range of testing **Solutions** that we offer, give organizations a fast start in developing and deploying software of the highest quality while reducing the risks, costs and time associated with it.

PTS is **ISO 9001:2008** and **27001:2013** Certified and has already served **400+** customers and having completed **40,000** hours of testing. We have discovered more than **2,40,000** bugs in various applications.

We are empaneled vendor of **STQC government of India** and we are under process of emplacement of Indian Computer Emergency Response Team (ICERT). We have certified, specialized and experienced testers for all types of testing. We have close to 100% project success ratio and 60% returned customer.

Our focused customers are Government and Defence.

## Control Page

Reporter ID	PTS-STQC-2021/PT/AS-006
Report Type	Final Report
Date	15/01/2021
Document Type	Audit Report
Client Name	Maharashtra Knowledge Corporation Ltd.
Client Address	MKCL Seawood BO, Plot No. 30, Sector 42-A, Nerul, Navi Mumbai 400706, Maharashtra, INDIA.
Type of Audit	Security Audit
Project Name/ID	Assam Skill Development Mission
Test Environment	<a href="https://sdmms-stqc.mkcl.org/">https://sdmms-stqc.mkcl.org/</a>
Production Environment	<a href="https://www.skillmissionassam.org/">https://www.skillmissionassam.org/</a>
Test Method	Manual
Reference Document/Base Document	OWASP 10 Vulnerabilities
Audit Start Date	15/01/2021
Audit End Date	16/03/2021
Compliance Date	17/03/2021
Prepared By	Bhim Bhadur
Review By	Mr. Vikash Kumar
Approve By	Mr. Vikash Kumar

## Disclaimer

This report has been issued based upon our work at during 15-01-2021 to 16-03-2021 and compliance on 17-03-2021. The scope of work was to conduct functional audit.

The report prepared for the period prescribed in the report as an account of work allocated by Government of Assam Skill Development Mission to Precise Testing Solution Pvt. Ltd. (*herein after referred as "PTS"*). Though all efforts have been made to ensure the accuracy of the content in this Report, the same should not be construed as a statement of law, Policy or used for any legal purposes. Assam Skill Development Mission advised to verify/check any information with the relevant Authorities(s), and to obtain any appropriate professional advice before acting on the information provided in the report.

Links in the form of recommendation as mentioned in the report if any, are provided for reference and further reading only. PTS is not responsible for the contents or reliability of linked websites and does not necessarily endorse the view expressed within them.

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## Document Information

Project Name	Assam Skill Development Mission
Product Version No	Application Version : 1.0 MD5 Hash : f30eea2626c12429e1058f428c463256
Audit Period	15/01/2021 to 16/03/2021
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Report Prepared By	Bhim Bhadur
Reviewed By	Mr. Vikash Kumar
Final Report	17/03/2021
Review Date	16/03/2021
Document Owner	Maharashtra Knowledge Corporation Ltd. MKCL Seawood BO, Plot No. 30, Sector 42-A, Nerul, Navi Mumbai 400706 , Maharashtra, INDIA.

## Intended Recipient

S.N	Intended Recipient
1	Maharashtra Knowledge Corporation Ltd. MKCL Seawood BO, Plot No. 30, Sector 42-A, Nerul Navi Mumbai 400706 , Maharashtra, INDIA.

## Restriction of Circulation

For Internal Circulation Only

## Audit Team

S.N	Name	Project Role	Email Address
1	Vikash Kumar	Delivery In Charge	info@precisetestingsolution.com
2	Gaurav Kumar	Audit Executive	Gaurav.kumar@precisetestingsolution.com
3	BhimBhadur	Audit Executive	Bhim@precisetestingsolution.com

## Coordinating Team Detail

S.N	Name	Email id
1	Anand Kulkarni Program Coordinator	anandku@mkcl.org

## Objective of Audit

Security Testing For Skill Development Mission Management Website.

## Scope of Audit

www.mktl.org

3. **Scope of work:** You are expected to carry out an assessment on basis of below scope:

No	Question	Application Details 1
1	What is the application used for? Anything special about the architecture? (eg. Tiered application, Citrix based, Wireless GPRS, Mainframe, Embedded System)	Tiered Application
2	What are the different types of user roles for the application?	Department User 1,Department User 2,Department User 3,Assessing Body User, TP ,SPMU ,Department Executive, Sub Department, Sub Department User, Department Executive 2,File Lead Supervisor, PM,APM,MD,AMD,RM Reports, System Admin, Organization ,Knowledge Partner, Regional Manager, Learner, applicant, Joint Venture Administrator, Authorised Learning Centre, Authorised Learning Centre, Accountant, RLC,LLC
	Are there different privileges/roles for users in the application?	Yes
3	What sensitive data is handled by the application?	User password, mobile number, adhaar card, Pan card, Voter Id
	Which users handle this data?	System User
4	URL of the application for Development and/or Test and/or Staging and/or Production Server	Will be informed once setup is ready
5	No. of business/application modules	26
6	Technologies the application makes use of (e.g. J2EE / DOT NET / PHP / WebSphere etc.), python	Backend : Node JS, Java for Reporting Front end: Angular JS Database : MYSQL
7	Approximate number of pages in the application.	400-500 Pages
8	No. of dynamic pages in the application.	400-500 Pages

## Approach &Methodology

### 1. Document Referred

OWASP top 10 Vulnerability and OWASP top 10 checklist

### 2. Standard & Guideline

International Professional Practices framework (PPF)

### 3. Methodology

- Understanding the requirement
- Preparation of checklist/Test Case for sample audit bases on requirement, understanding of documents under reference, and auditor's judgment

- Verification of parameters
- Execution of test cases for assumed output and making note of the exception
- Process verification by interview and other supporting document
- Observation and noting
- Discussion/Interaction with Maharashtra Knowledge Corporation Ltd.
- Conclusion

## Introduction

Assam Skill Development Mission is registered under Society Act in 2015 and is working under newly created Skill, Employment & Entrepreneurship Department, Govt. of Assam with the visions of capacity building of unemployed youth and to deliver quality skill training leading to meaningful employment to stimulate economy of the state. The Mission started its functioning from January, 2017 as:

- An apex body of all skill initiatives in the state to achieve skilling target of 1.50 lakhs youths in a year.
- To provide quality skill training for gainful employment of educated unemployed youth.
- To encourage development of entrepreneurs in different sectors.
- To implement central sponsored skilling schemes in the state.

## Risk Classification

This document is an exception-bases report highlighting the control weakness and potential improvement area with risk levels assigned. The risk level assigned are as follows depending on the impact and occurrence. The risk are assigned as per below table.

Control Importance	Impact	
Metrics	Severity	Priority
Critical	HIGH	HIGH
Medium	LOW	HIGH
Medium	HIGH	LOW
Low/Minor	LOW	LOW

## Audit Environment

The Assam Skill Development Mission to undertake security Audit of Assam Skill Development Mission V1.0 application with a view to check the resilience of the application.

We have tested application as per defined OWASP top 10 Vulnerability and OWASP top 10 checklist.

## Observation Summery

S.N	Risk Category (Functional & Security Testing)	No. Of Observation	Open Observation
1	High	1	0
2	Medium	8	0
3	Low /Minor	8	0
	Total	17	

## Conclusion

We have closely worked with the team Maharashtra Knowledge Corporation Ltd. and checked each and every application Functionality related with Assam Skill Development Mission. We have performed the evaluation of functionality, system process and domain application of Assam Skill Development Mission software, which includes integrity and confidentiality of information and further ensure compliance to regulatory and corporate security. We have covered all the scope of work, which also includes in SRS of We have checked the functionality as per the provided process as per prevailing standard available as on date.

During testing of Assam Skill Development Mission V 1.0, we have found some bugs which is mention in above "Observation Summery" and all bugs are fixed by development team, now application functional flow working fine and don't have any major bugs.

## Following functionality were audited

Application audit for Security Standard

Implementation carried out as per User manual and defined standard

Verification of the reports provided in the application including Number of generated, updated, downloaded etc.

## Assam Skill Development Mission Security Testing Environment

S.N	Main Functionality	Environment
1	<a href="https://sdmms-stqc.mkcl.org/">https://sdmms-stqc.mkcl.org/</a>	DEMO

## Security Testing Observation:

The Open Web Application Security Project (OWASP) is a 501(c)(3) worldwide not-for-profit charitable organization focused on improving the security of software. Our mission is to make software security visible, so that individuals and organizations worldwide can make informed decisions about the true software security risks.

We will test based on OWASP recommendations.

### **BUG SEVERITY: HIGH**

#### **BUG ID 1: SQL Injection**

**Severity:** High

**Description:** Due to the requirement for dynamic content of today's web applications, many rely on a database backend to store data that will be called upon and processed by the web application (or other programs). Web applications retrieve data from the database by using Structured Query Language (SQL) queries.

#### **Reference Id(s):**

- OWASP Top 10 – A1:2017-Injection
- CWE-89

#### **Vulnerable Point(s):**

1. <https://sdmms-stqc.mkcl.org/#/candidateSearchFacility/14/166>

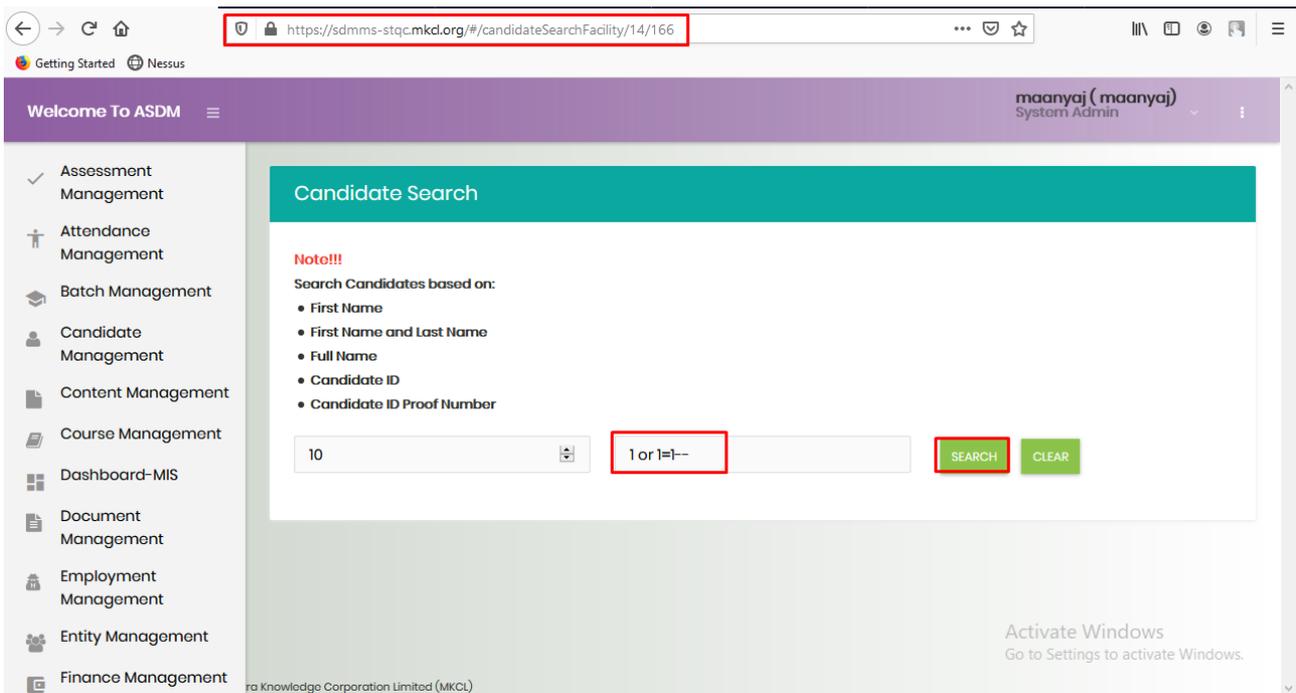
#### **Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1

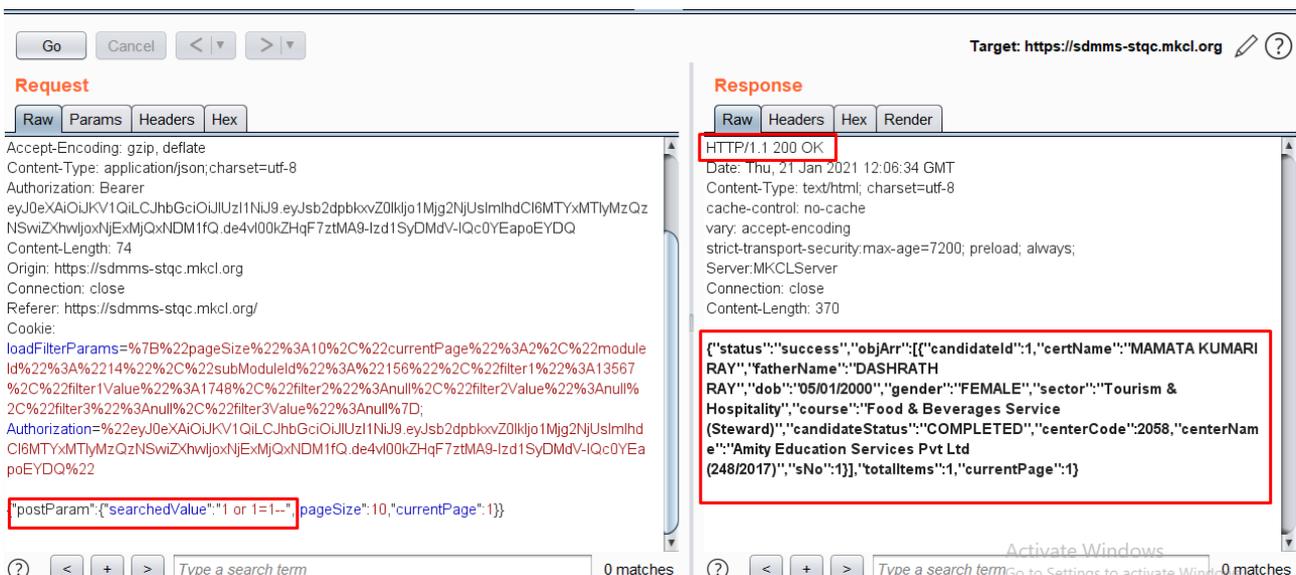
1. Open browser
2. Open burpsuite
3. Open Assam skil development webiste
4. login as – username: maanyaj, password: test#123
5. Open the following url in browser

**<https://sdmms-stqc.mkcl.org/#/candidateSearchFacility/14/166>**

6. Put the sql injection as 1or1=1-- into search bar



7. And click search



8. As we can see the response in burpsuite after putting sql injection in search bar, an SQL injection occurs when a value originating from the client's request is used within a SQL query without prior sanitisation. This could allow cyber-criminals to execute arbitrary SQL code and steal data or use the additional functionality of the database server to take control of more server components.

Getting Started Nessus

Welcome To ASDM maanyaj (maanyaj) System Admin

### Candidate Search

Total Candidates : 1 Page: 1

10

andidate Id	Candidate Name (Certificate Name)	Father Name	Date of Birth	Gender	Sector	Course	Candidate Status	Center Code	Center Name	Actions
1	MAMATA KUMARI RAY	DASHRATH RAY	05/01/2000	FEMALE	Tourism & Hospitality	Food & Beverages Service (Steward)	COMPLETED	2058	Amity Education Services Pvt Ltd (248/2017)	<input type="button" value="VIEW"/>

Activate Windows  
Go to Settings to activate Windows.

## 9. As we can see the user information by injecting sql injection

Getting Started Nessus

Welcome To ASDM maanyaj (maanyaj) System Admin

### Candidate Basic Detail

Candidate Id :	1
First Name :	MAMATA
Middle Name :	KUMARI
Last Name :	RAY
Candidate Name :	MAMATA KUMARI RAY
Date of Birth (dd/mm/yyyy)	05/01/2000
Age Proof :	
Marital Status :	SINGLE

Activate Windows  
Go to Settings to activate Windows.

**Solution:** The only proven method to prevent against SQL injection attacks while still maintaining full application functionality is to use parameterized queries (also known as prepared statements). When utilising this method of querying the database, any value supplied by the client will be handled as a string value rather than part of the SQL query.

Additionally, when utilising parameterized queries, the database engine will automatically check to make sure the string being used matches that of the column. For example, the database engine will check that the user supplied input is an integer if the database column is configured to contain integers.

**Status: Closed**

**BUG SEVERITY: MEDIUM**

## **BUG ID 2: Parameter Tampering Attack**

**Severiyt:** Medium

**Description:** The Web Parameter Tampering attack is based on the manipulation of parameters exchanged between client and server in order to modify application data, such as user credentials and permissions, price and quantity of products, etc. Usually, this information is stored in cookies, hidden form fields, or URL Query Strings, and is used to increase application functionality and control.

### **Reference Id(s):**

- OWASP Top 10 (2017): A5-Broken Access Control
- CWE-472

### **Vulnerable Point(s):**

1. <https://sdmms-stqc.mkcl.org/#/woms/workflowliststep/27/122/23>

### **Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
  1. Open mozilla firefox
  2. Open burpsuite
  3. Open Asam skill development website
  4. Enter credentials as usernam: maanyaj, password: test#123
  5. open the following url and start intercepting

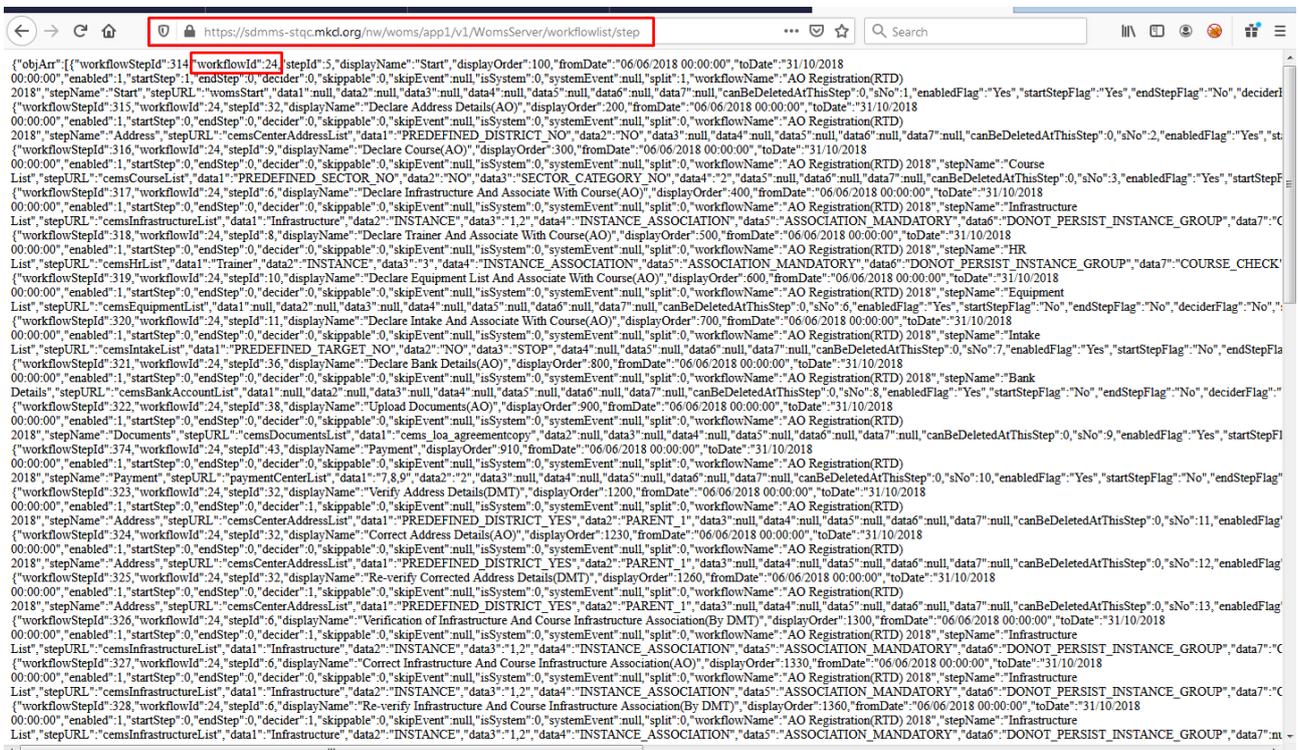
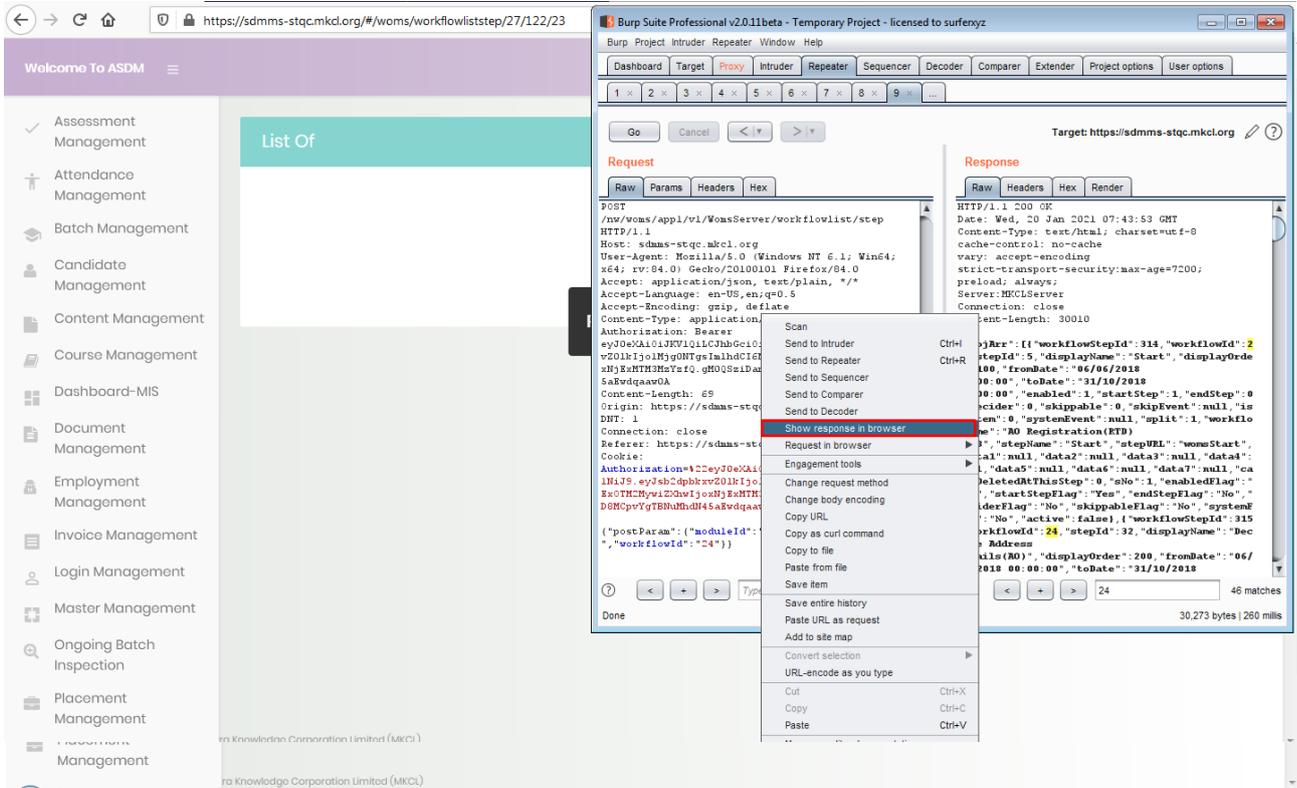
**<https://sdmms-stqc.mkcl.org/#/woms/workflowliststep/27/122/23>**

The screenshot shows the Burp Suite interface with a request and response for the URL `https://sdms-stqc.mkcl.org/#/woms/workflowliststep/27/122/23`. The request is a POST to `/woms/app/v1/womsServer/workflowlist/step` with a `postParam` containing `moduleId: 27` and `subModuleId: 122`. The response is an HTTP 200 OK with a JSON body containing workflow information for step 23, including `workflowId: 23` and `displayOrder: 100`.

6. We have temperd the workflow id 23 to 24 and send the request to server and recive server response 200 ok with the information of 24 workflow id

The screenshot shows the Burp Suite interface with a request and response for the URL `https://sdms-stqc.mkcl.org/#/woms/workflowliststep/27/122/23`. The request is a POST to `/woms/app/v1/womsServer/workflowlist/step` with a `postParam` containing `moduleId: 27` and `subModuleId: 123`. The response is an HTTP 200 OK with a JSON body containing workflow information for step 24, including `workflowId: 24` and `displayOrder: 32`.

## 7. Right click and click on show response in browser.



### Solution:

The forms on the site should have some built-in protection

2. Using regex to limit or validate data
3. Server-side validation compared with all inputs
4. Avoid unwanted or hidden data
5. Don't allow interception

**Status: Closed**

**BUG ID 3: Sensitive Information Disclosure (MITM)**

**Severity:** Medium

**Description:** Cyberattack where a malicious actor inserts him/herself into a conversation between two parties, impersonates both parties and gains access to information that the two parties were trying to send to each other. A man-in-the-middle attack allows a malicious actor to intercept, send and receive data meant for someone else, or not meant to be sent at all, without either outside party knowing until it is too late. Man-in-the-middle attacks can be abbreviated in many ways, including MITM, MitM,

**Reference Id(s):**

- OWASP Top 10 (2017): A3 - Sensitive Data Exposure
- CWE-311
- WASC-13

**Vulnerable Point(s):**

1. <https://stqc.mkcl.org/nw/moms/app1/v1/MomsServer/sudbmoduleformconfig>

**Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
  1. Open mozilla firefox
  2. Open burpsuite
  3. Open Asam skill development website
  4. Enter credentials as usernam: maanyaj, password: test#123
  5. open the following url and start intercepting
  6. <https://stqc.mkcl.org/nw/moms/app1/v1/MomsServer/sudbmoduleformconfig>



```
Getting Started Nessus
https://sdmms-stqc.mkd.org/nw/wams/app/v1/WamsServer/targetallocationlist/get

{"objArr":[{"targetAllocationId":3070,"centerCourseAssociationId":234,"entityName":"Indianeers Media Pvt. Ltd (195/2017)","entityPartnerCode":"AS192700183100","entityEmail":"","entityMobile":"","district":"Baksa","block":"BASKA","courseCategoryName":"Domain Skilling","sectorName":"Healthcare","courseName":"General Duty Assistant","residentialTraining":"No","startDate":"20/01/2020","endDate":"21/05/2020","target":60,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"Indianeers Media Pvt. Ltd","parentLevel2Name":null,"sNo":1}, {"targetAllocationId":2260,"centerCourseAssociationId":843,"entityName":"KGM Immigration & Educational Consultant Pvt Ltd (439/2018)","entityPartnerCode":"AS192800187400","entityEmail":"","entityMobile":"","district":"Baksa","block":"BARAMA","courseCategoryName":"Domain Skilling","sectorName":"Tourism & Hospitality","courseName":"Front Office Associate","residentialTraining":"No","startDate":"17/07/2019","endDate":"30/01/2020","target":60,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"KGM Immigration & Educational Consultants Pvt Ltd","parentLevel2Name":null,"sNo":2}, {"targetAllocationId":1627,"centerCourseAssociationId":82,"entityName":"Dreams N.G.O (440/2018)","entityPartnerCode":"AS192900187700","entityEmail":"","entityMobile":"","district":"Baksa","block":"TAMULPUR","courseCategoryName":"Domain Skilling","sectorName":"Electronics","courseName":"Field Technician Networking and Storage","residentialTraining":"No","startDate":"03/06/2019","endDate":"15/10/2019","target":30,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"Dreams N.G.O","parentLevel2Name":null,"sNo":3}, {"targetAllocationId":722,"centerCourseAssociationId":82,"entityName":"Dreams N.G.O (440/2018)","entityPartnerCode":"AS192900187700","entityEmail":"","entityMobile":"","district":"Baksa","block":"TAMULPUR","courseCategoryName":"Domain Skilling","sectorName":"Electronics","courseName":"Field Technician Networking and Storage","residentialTraining":"No","startDate":"21/02/2019","endDate":"30/07/2019","target":30,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"Dreams N.G.O","parentLevel2Name":null,"sNo":4}, {"targetAllocationId":3483,"centerCourseAssociationId":94,"entityName":"NEDS TECHNICAL INSTITUTE (441/2018)","entityPartnerCode":"AS193000187800","entityEmail":"","entityMobile":"","district":"Baksa","block":"TAMULPUR","courseCategoryName":"Domain Skilling","sectorName":"Electronics","courseName":"Field Technician Networking and Storage","residentialTraining":"No","startDate":"11/12/2020","endDate":"13/05/2021","target":25,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"NEDS TECHNICAL INSTITUTE","parentLevel2Name":null,"sNo":5}, {"targetAllocationId":749,"centerCourseAssociationId":94,"entityName":"NEDS TECHNICAL INSTITUTE (441/2018)","entityPartnerCode":"AS193000187800","entityEmail":"","entityMobile":"","district":"Baksa","block":"TAMULPUR","courseCategoryName":"Domain Skilling","sectorName":"Electronics","courseName":"Field Technician Networking and Storage","residentialTraining":"No","startDate":"25/02/2019","endDate":"30/07/2019","target":30,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"NEDS TECHNICAL INSTITUTE","parentLevel2Name":null,"sNo":6}, {"targetAllocationId":748,"centerCourseAssociationId":94,"entityName":"NEDS TECHNICAL INSTITUTE (441/2018)","entityPartnerCode":"AS193000187800","entityEmail":"","entityMobile":"","district":"Baksa","block":"TAMULPUR","courseCategoryName":"Domain Skilling","sectorName":"Electronics","courseName":"Field Technician Networking and Storage","residentialTraining":"No","startDate":"25/02/2019","endDate":"30/07/2019","target":30,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"NEDS TECHNICAL INSTITUTE","parentLevel2Name":null,"sNo":7}, {"targetAllocationId":566,"centerCourseAssociationId":31,"entityName":"NEDS TECHNICAL INSTITUTE (453/2018)","entityPartnerCode":"AS193100187800","entityEmail":"","entityMobile":"","district":"Baksa","block":"PUB NALBARI","courseCategoryName":"Domain Skilling","sectorName":"Electronics","courseName":"Field Technician Networking and Storage","residentialTraining":"No","startDate":"14/02/2019","endDate":"05/03/2020","target":20,"scheme":"Placement Linked State Funded Scheme","fundingEntityName":"ASDM","subFundingEntityName":null,"parentLevel1Name":"NEDS TECHNICAL INSTITUTE","parentLevel2Name":null,"sNo":8}, {"targetAllocationId":978,"centerCourseAssociationId":31,"entityName":"NEDS TECHNICAL INSTITUTE (453/2018)","entityPartnerCode":"AS193100187800","entityEmail":"","entityMobile":"","district":"Baksa","block":"PUB NALBARI","courseCategoryName":"Domain
```

```
Getting Started Nessus
https://sdmms-stqc.mkd.org/nw/moms/app/v1/MomsServer/submoduleformconfig/get

{"objArr":[{"formConfigId":477,"roleId":36,"subModuleId":100,"roleName":"Accountant","subModuleName":"View TC Details","loginId":null,"loginName":null,"sNo":1}, {"formConfigId":741,"roleId":88,"subModuleId":100,"roleName":"AMD","subModuleName":"View TC Details","loginId":null,"loginName":null,"sNo":2}, {"formConfigId":736,"roleId":88,"subModuleId":181,"roleName":"AMD","subModuleName":"Jobs","loginId":null,"loginName":null,"sNo":3}, {"formConfigId":742,"roleId":90,"subModuleId":100,"roleName":"AMD 2","subModuleName":"View TC Details","loginId":null,"loginName":null,"sNo":4}, {"formConfigId":737,"roleId":90,"subModuleId":181,"roleName":"AMD 2","subModuleName":"Jobs","loginId":null,"loginName":null,"sNo":5}, {"formConfigId":177,"roleId":57,"subModuleId":100,"roleName":"AO","subModuleName":"View TC Details","loginId":null,"loginName":null,"sNo":6}, {"formConfigId":738,"roleId":87,"subModuleId":181,"roleName":"APM-Finance","subModuleName":"Jobs","loginId":null,"loginName":null,"sNo":7}, {"formConfigId":743,"roleId":87,"subModuleId":100,"roleName":"APM-Finance","subModuleName":"View TC Details","loginId":null,"loginName":null,"sNo":8}, {"formConfigId":576,"roleId":60,"subModuleId":181,"roleName":"Candidate","subModuleName":"Jobs","loginId":null,"loginName":null,"sNo":9}, {"formConfigId":135,"roleId":73,"subModuleId":100,"roleName":"Department User 1","subModuleName":"View TC Details","loginId":null,"loginName":null,"sNo":10}, {"roleId":36,"roleName":"Accountant"}, {"roleId":88,"roleName":"AMD"}, {"roleId":90,"roleName":"AMD 2"}, {"roleId":57,"roleName":"AO"}, {"roleId":87,"roleName":"APM-Finance"}, {"roleId":76,"roleName":"Assessing Body"}, {"roleId":77,"roleName":"Assessing Body User"}, {"roleId":52,"roleName":"CallCenter"}, {"roleId":60,"roleName":"Candidate"}, {"roleId":72,"roleName":"Corporation"}, {"roleId":1,"roleName":"Department"}, {"roleId":79,"roleName":"Department Executive"}, {"roleId":82,"roleName":"Department Executive 2"}, {"roleId":81,"roleName":"Department User 1"}, {"roleId":74,"roleName":"Department User 2"}, {"roleId":75,"roleName":"Department User 3"}, {"roleId":70,"roleName":"Directorate"}, {"roleId":8,"roleName":"DPMT"}, {"roleId":58,"roleName":"Employer"}, {"roleId":7,"roleName":"File Lead"}, {"roleId":85,"roleName":"File Supervisor"}, {"roleId":10,"roleName":"Joint Venture Administrator"}, {"roleId":66,"roleName":"Knowledge Partner"}, {"roleId":89,"roleName":"MD"}, {"roleId":65,"roleName":"Organization"}, {"roleId":86,"roleName":"PM-Finance"}, {"roleId":42,"roleName":"RM"}, {"roleId":63,"roleName":"RM Reports"}, {"roleId":4,"roleName":"SDC"}, {"roleId":59,"roleName":"SISA"}, {"roleId":71,"roleName":"Society"}, {"roleId":78,"roleName":"SPMU"}, {"roleId":83,"roleName":"SSC"}, {"roleId":84,"roleName":"SSC User 1"}, {"roleId":80,"roleName":"Sub Department"}, {"roleId":81,"roleName":"Sub Department User"}, {"roleId":64,"roleName":"System Admin"}, {"roleId":2,"roleName":"Training Partner"}], "subModuleArr":[{"subModuleName":"AMD Creation","subModuleId":185}, {"subModuleName":"APM Creation","subModuleId":184}, {"subModuleName":"Assessment","subModuleId":133}, {"subModuleName":"Attendance Monitoring Dashboard","subModuleId":165}, {"subModuleName":"Attendance(New)","subModuleId":128}, {"subModuleName":"Attendance-Report","subModuleId":70}, {"subModuleName":"Bank","subModuleId":107}, {"subModuleName":"Bank Access","subModuleId":108}, {"subModuleName":"Batch Inspection Access","subModuleId":178}, {"subModuleName":"Batch Released","subModuleId":151}, {"subModuleName":"Batch(New)","subModuleId":127}, {"subModuleName":"Batch-Academic","subModuleId":176}, {"subModuleName":"Batch-Access","subModuleId":58}, {"subModuleName":"Batch-Candidate Preference","subModuleId":31}, {"subModuleName":"Batch-Master Batch","subModuleId":29}, {"subModuleName":"Batch-Master Category","subModuleId":28}, {"subModuleName":"Batch-Start Date","subModuleId":39}, {"subModuleName":"Candidate Allocation","subModuleId":170}, {"subModuleName":"Candidate Bank Update","subModuleId":163}, {"subModuleName":"Candidate Legacy Data","subModuleId":156}, {"subModuleName":"Candidate Mobilisation","subModuleId":55}, {"subModuleName":"Candidate Search","subModuleId":166}, {"subModuleName":"Capacity Building","subModuleId":96}, {"subModuleName":"Center List Report","subModuleId":152}, {"subModuleName":"Change Password","subModuleId":67}, {"subModuleName":"Content-Downloads","subModuleId":62}, {"subModuleName":"Course Access","subModuleId":168}, {"subModuleName":"Course Config Access","subModuleId":169}, {"subModuleName":"Course Subscription","subModuleId":98}, {"subModuleName":"Course-Configuration","subModuleId":38}, {"subModuleName":"Course-Course","subModuleId":37}, {"subModuleName":"Dashboard-Access","subModuleId":157}, {"subModuleName":"Dashboard-MIS","subModuleId":158}, {"subModuleName":"DDUGKY Registration","subModuleId":123}, {"subModuleName":"Department Creation","subModuleId":148}, {"subModuleName":"Department User Creation","subModuleId":149}, {"subModuleName":"Disabled Center","subModuleId":164}, {"subModuleName":"Discrepancy","subModuleId":190}, {"subModuleName":"DMT","subModuleId":103}, {"subModuleName":"Document Library","subModuleId":175}
```

**Solution:** Both types of data should be protected. When thinking about data in transit, one way to protect it on a website is by having an SSL certificate. SSL is the acronym for Secure Sockets Layer. It is the standard security technology for establishing an encrypted link between a web server and a browser. SSL certificates help protect the integrity of the data in transit between the host (web server or firewall) and the client (web browser).

**Status: Closed**

## BUG ID 4: Vulnerable JS Library

Seveiry: Medium

Description: The identified library jquery, version 1.11.2 is vulnerable.

### Reference Id(s):

- CVE-2020-11023
- CVE-2020-11022
- CVE-2015-9251
- WASC-829

### Vulnerable Point(s):

1. vulnerable js library

### Proof of Concept(PoC):

- Proof of Concept of Vulnerable Point Number 1
1. Open browser
  2. Open burpsuite
  3. Start intercepting the following url

<https://sdmms-stqc.mkcl.org/js/app.3c83760e04525f8942d8.bundle.js>

The screenshot shows a network request and response in Burp Suite. The request is a GET request to the URL `https://sdmms-stqc.mkcl.org/js/app.3c83760e04525f8942d8.bundle.js?4b4192b7b13ce4b7601 HTTP/1.1`. The response is a JavaScript file containing jQuery version 1.11.2. The version number "jQuery v1.11.2" is highlighted in red in the response code. The response code is as follows:

```
122476 var _typeof = typeof Symbol === "function" && typeof Symbol.iterator === "symbol" ? function (obj) {  
122477 return obj && typeof Symbol === "function" && obj.constructor === Symbol && obj !== Symbol.prototype;  
122478 };  
122479 function (a, b) {  
122480 "object" === (false ? "undefined" : _typeof(module)) && "object" === _typeof(module.exports) ? modu  
122481 l { (a, document) throw new Error("jQuery requires a window with a document");  
122482 return b(a),  
122483 };  
122484 function (a, b) {  
122485 var c = [],  
122486 d = c.slice,  
122487 e = c.concat,  
122488 f = c.push,  
122489 g = c.indexOf,  
122490 h = {  
122491 },  
122492 i = h.toString,  
122493 j = h.hasOwnProperty,  
122494 k = {
```

4. Send request to repeater and click go

5. In response shows that jquery version 1.11.2 is vulnerable.

6. Reference link: [Jquery Jquery version 1.11.2 : Security vulnerabilities](#)

(cvedetails.com)

The screenshot shows the CVE Details website interface. The browser address bar displays the URL: [https://www.cvedetails.com/vulnerability-list/vendor\\_id-6538/product\\_id-11031/version\\_id-286366/Jquery-Jquery...](https://www.cvedetails.com/vulnerability-list/vendor_id-6538/product_id-11031/version_id-286366/Jquery-Jquery...). The page title is "CVE Details" with the subtitle "The ultimate security vulnerability datasource". The main content area is titled "Jquery » Jquery » 1.11.2: Security Vulnerabilities". Below the title, there is a table of vulnerabilities. The table has columns for #, CVE ID, CVE ID, # of Exploits, Vulnerability Type(s), Publish Date, Update Date, Score, Gained Access Level, Access, Complexity, Authentication, Conf., Integ., and Avail. Two vulnerabilities are listed:

#	CVE ID	CVE ID	# of Exploits	Vulnerability Type(s)	Publish Date	Update Date	Score	Gained Access Level	Access	Complexity	Authentication	Conf.	Integ.	Avail.
1	CVE-2019-11358	79		XSS	2019-04-19	2019-06-12	4.3	None	Remote	Medium	Not required	None	Partial	None
2	CVE-2015-9251	79		XSS	2018-01-18	2019-06-10	4.3	None	Remote	Medium	Not required	None	Partial	None

Below the table, there is a note: "Total number of vulnerabilities : 2 Page : 1 (This Page)".

**Solution:** Please upgrade to the latest version of jquery.

**Status:** Closed

## BUG ID 5: Weak Lockout Mechanism

**Severity:** Medium

**Description:** Account lockout mechanisms require a balance between protecting accounts from unauthorized access and protecting users from being denied authorized access. Accounts are typically locked after 3 to 5 unsuccessful attempts and can only be unlocked after a predetermined period of time, via a self-service unlock mechanism, or intervention by an administrator.

**Reference Id(s):**

- OWASP Top 10 (2017): A62- Broken Authentication
- CWE-1216
- WASC-15

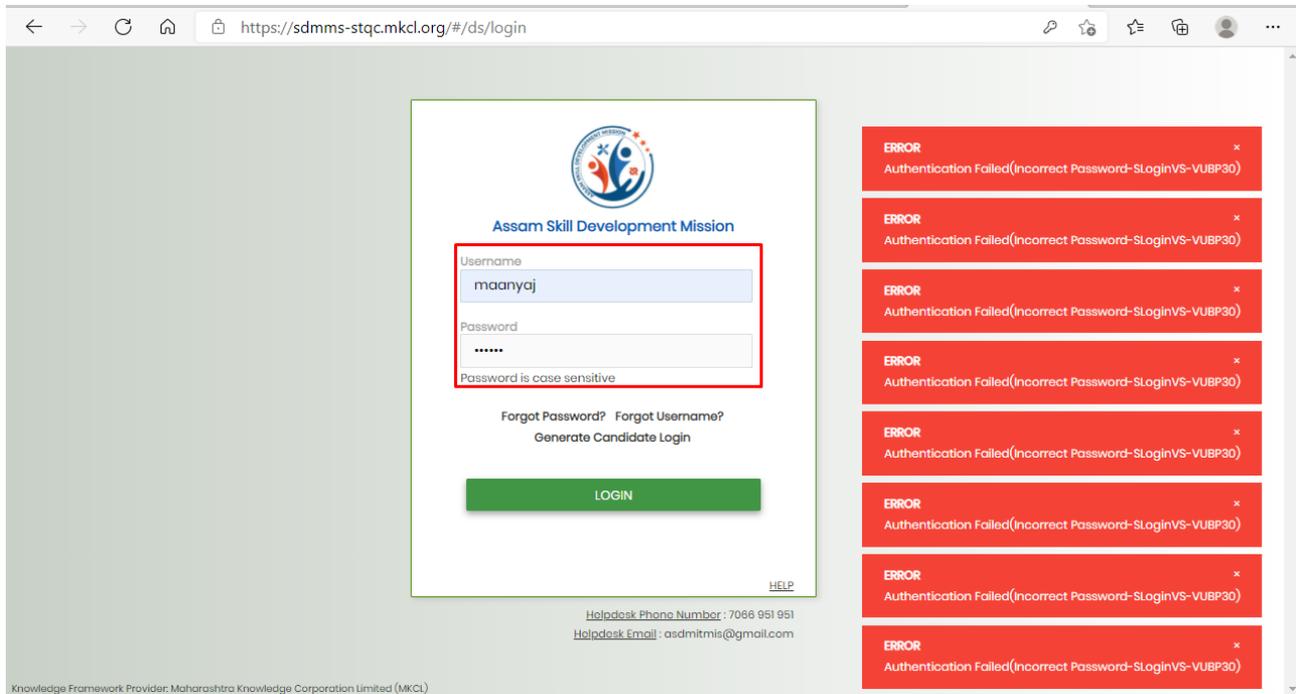
**Vulnerable Point(s):**

1. <https://sdmms-stqc.mkcl.org/#/ds/login>

## Proof of Concept(PoC):

### ● Proof of Concept of Vulnerable Point Number 1

1. Open the Web Application using main URL <https://sdmms-stqc.mkcl.org>
2. Login with user id as maanyaj and put the invalid password and repeat it 7-8 times



**Solution:** Apply account unlock mechanisms depending on the risk level. In order from lowest to highest assurance, need to apply Time-based lockout and unlock. Self-service unlock (sends unlock email to registered email address). Manual administrator unlock. Manual administrator unlock with positive user identification.

**Status:** Closed

**BUG ID 6: Clear Text Transmission Of Credentials**

**Severity:** Medium

**Description:** Applications transmit passwords and username over unencrypted connections, making them vulnerable to interception. To exploit this vulnerability, an attacker must be suitably positioned to eavesdrop on the victim's network traffic. Vulnerabilities that result in the disclosure of users' passwords can result in compromises that are extremely difficult to investigate due to obscured audit trails. Even if the application itself only handles non-sensitive information, exposing passwords puts users who have re-used their password elsewhere at risk.

**Reference Id(s):**

- OWASP Top 10 (2017): A6 - Security Misconfiguration
- CWE-319, 310

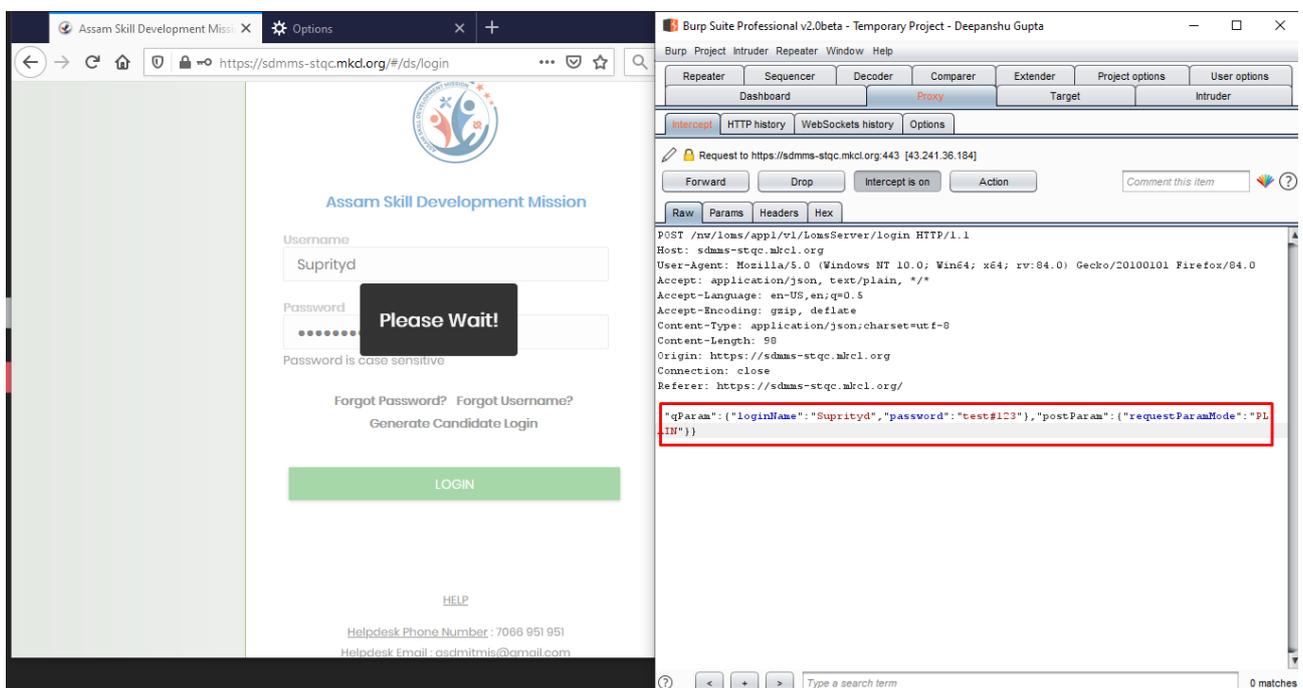
## Vulnerable Point(s):

1. <https://sdmms-stqc.mkcl.org/#/ds/login>

## Proof of Concept(PoC):

### ● Proof of Concept of Vulnerable Point Number 1

1. Open mozilla firefox browser
2. Open burpsuite
3. Open the following url - <https://sdmms-stqc.mkcl.org/#/ds/login>
4. Enter credentials as username: suprityd, password; test#123
5. Then start intercepting in the burpsuite



**Solution:** Applications should use transport-level encryption (SSL or TLS) to protect all sensitive communications passing between the client and the server. Communications that should be protected include the login mechanism and related functionality, and any functions where sensitive data can be accessed or privileged actions can be performed. These areas should employ their own session handling mechanism, and the session tokens used should never be transmitted over unencrypted communications. If HTTP cookies are used for transmitting session tokens, then the secure flag should be set to prevent transmission over clear-text HTTP.

**Status:** Closed

BUG ID 7: Insufficient Session Expiration

**Severity:** Medium

**Description:** The application does not timeout inactive sessions within an appropriate amount of time. Once an individual session is established, it remains active for an extended period of time. This allows user sessions to remain valid longer than necessary leaving them open to attacks.

**Reference Id(s):**

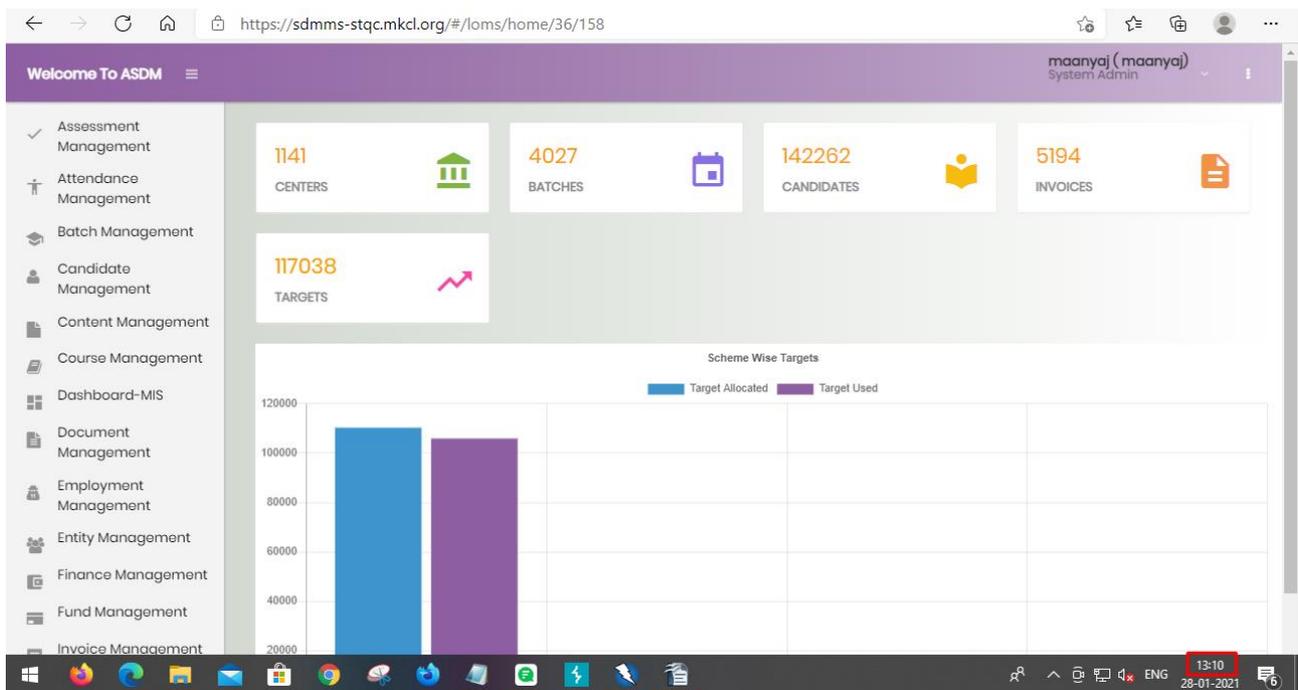
- CWE-613

**Vulnerable Point(s):**

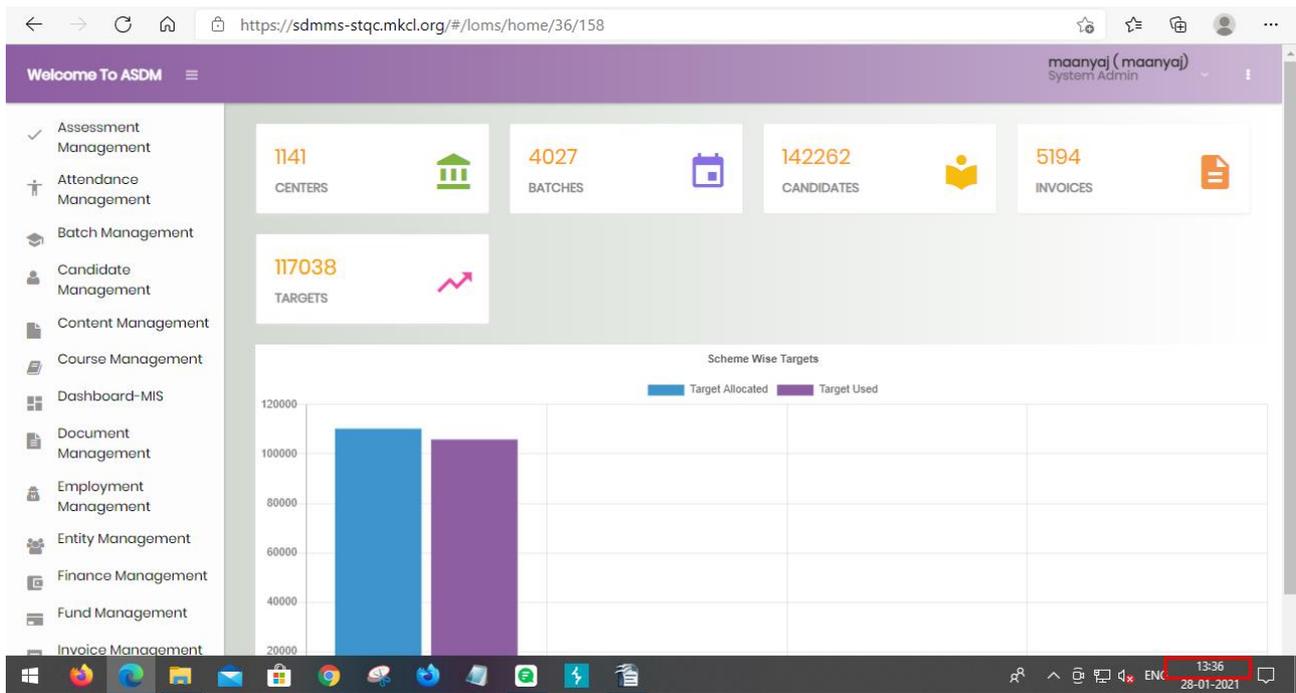
1. session timeout
- 2.

**Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
1. Open browser



2. Open Asam skill development website
3. Enter credentials as usernam: maanyaj, password: test#123we have login at 13:10 and minimize the window for 20 min and then refresh the website it show that applicaton doest not have session time out mechanism



**Solution:** Terminate a user’s session on the server after an organization-defined period of inactivity appropriate for the application’s level of sensitivity.

**Status:** Closed

## BUG ID 8: Arbitrary File Downloading

**Severity:** Medium

**Description:** If the web application doesn’t check the file name required by the user, any malicious user can exploit this vulnerability to download sensitive files from the server. Limit user from viewing or downloading files, a malicious user may attempt to view or download any file from your server. Attackers may construct malicious requests to download sensitive files from the server, and further embed website webshell files to control the website server host.

### Reference Id(s):

- OWASP Top 10 (2017): A6 – Security Misconfiguration
- CWE-494
- WASC-14

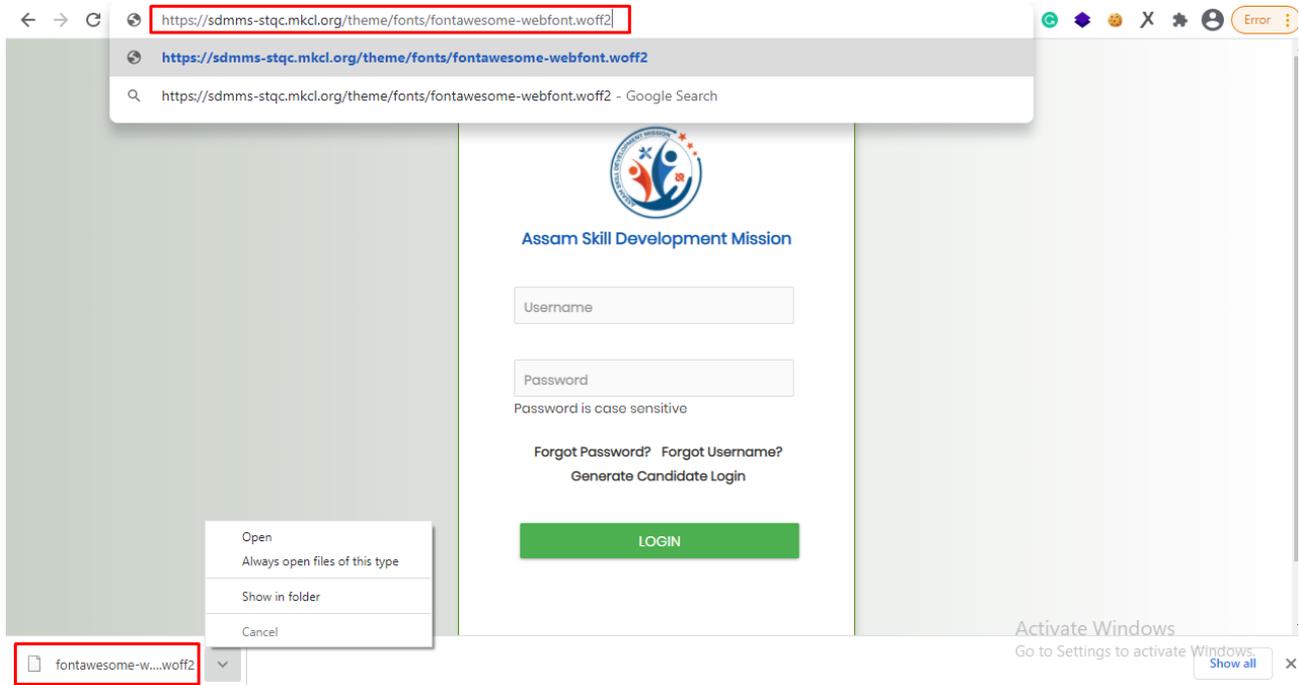
### Vulnerable Point(s):

1. <https://sdmms-stqc.mkcl.org/theme/fonts/fontawesome-webfont.woff2>

## Proof of Concept(PoC):

- Proof of Concept of Vulnerable Point Number 1
- 1. Open browser
- 2. Open the following url on browser

<https://sdmms-stqc.mkcl.org/theme/fonts/fontawesome-webfont.woff2>



**Solution:** Update the plug-in you are using to the latest version. Delete the file with the vulnerability if it is no longer being used. Ensure that the application server is never running with root privileges. Restrict the privileges to a limited user account.

**Status: Closed**

BUG ID 9: Clear Text Transmission Of PAN/Aadhar/Voter ID Number

**Severity: Medium**

**Description:** The web application sends the request over to the server in cleartext. If an attacker manages to steal the clear plain text, they could perform various types of cyber attacks against the user to whom the plain text. For example, an attacker could impersonate the victim user, and perform activities in their name. This could adversely affect the victim

**Reference Id(s):**

- OWASP Top 10 2017: A3 (Sensitive Data Exposure)
- CWE-311

● WASC-50

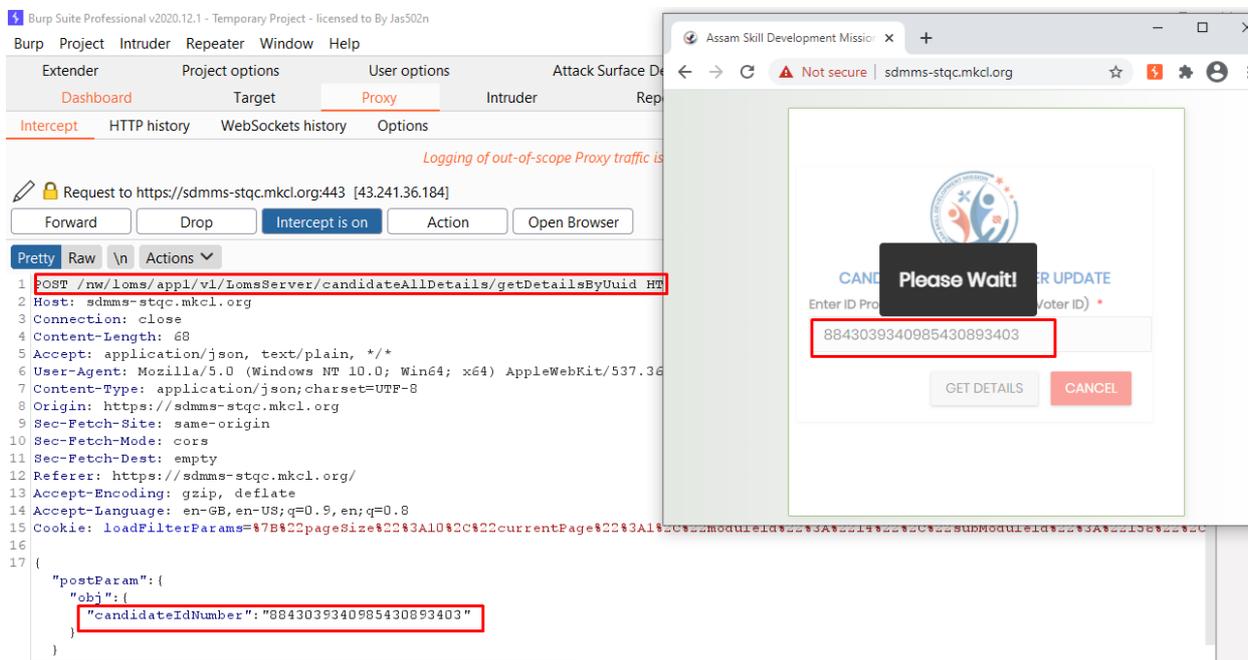
**Vulnerable Point(s):**

1. <https://sdmms-stqc.mkcl.org/#/candidateContactUpdate>

**Proof of Concept(PoC):**

● Proof of Concept of Vulnerable Point Number 1

1. Open mozilla firefox browser
2. Open burpsuite
3. Start intercepting the following url after entering the adhar or pan number



**<https://sdmms-stqc.mkcl.org/#/candidateContactUpdate>**

**Soultion:**Encrypt the request before transmitting it to the server

**Status: Closed**

## BUG SEVERITY: LOW

BUG ID 10: X-Frame-Options Header Not Set

**Seveiryt:** Low

**Description:** The Anti-MIME-Sniffing header X-Content-Type-Options was not set to 'nosniff'. This allows older versions of Internet Explorer and Chrome to perform MIME-sniffing on the response body, potentially causing the response body to be interpreted and displayed as a content type other than the declared content type. Current (early 2014) and legacy versions of Firefox will use the declared content type (if one is set), rather than performing MIME-sniffing.

**Reference Id(s):**

- CWE-16
- WASC-15

**Vulnerable Point(s):**

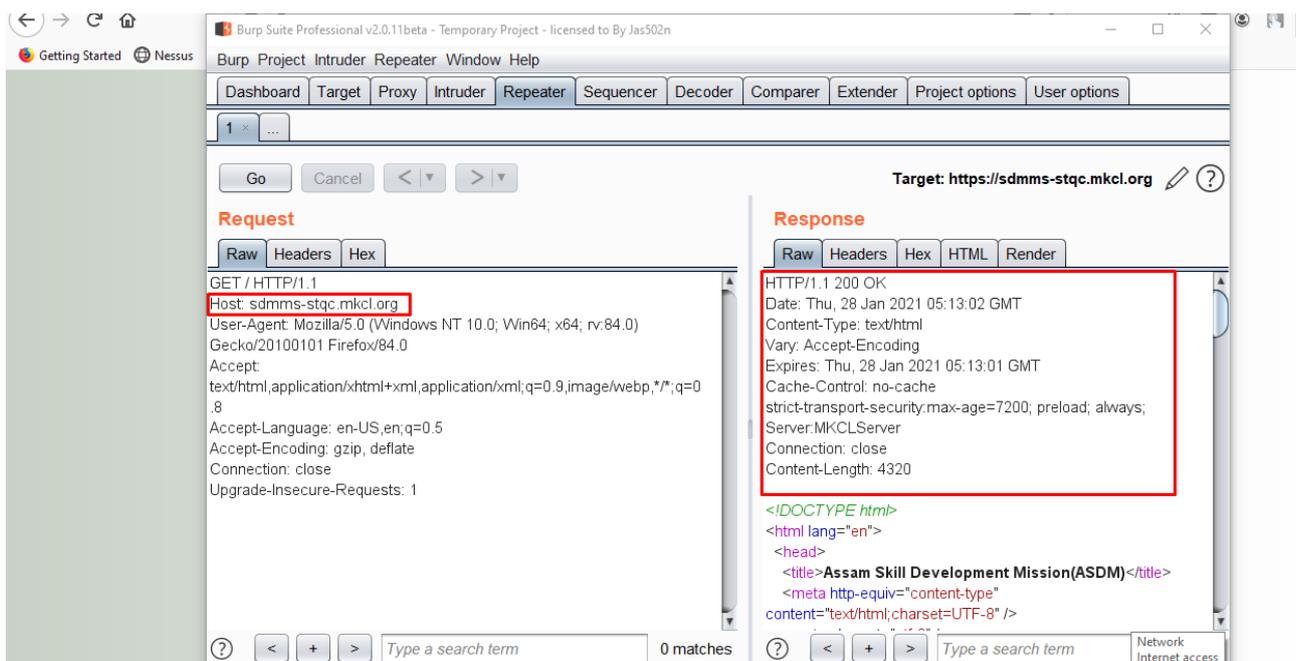
1. <https://sdmms-stqc.mkcl.org>

**Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
1. Open Burpsuite
  2. Open Browser
  3. Start Intercept The Following url

<https://sdmms-stqc.mkcl.org>

4. The Following Response shows that content-type-options header is missing



**Solution:** Ensure that the application/web server sets the Content-Type header appropriately, and that it sets the X-Content-Type-Options header to 'nosniff' for all web pages. If possible, ensure that the end user uses a standards-compliant and modern web browser that does not perform MIME-sniffing at all, or that can be directed by the web application/web server to not perform MIME-sniffing.

**Status:** Closed

BUG ID 11: X-XSS-Protection header is not defined

**Severity:** Low

**Description:** The HTTP 'X-XSS-Protection' response header is a feature of modern browsers that allows websites to control their XSS auditors. The server is not configured to return a 'X-XSS-Protection' header which means that any pages on this website could be at risk of a Cross-Site Scripting (XSS) attack

**Reference Id(s):**

- OWASP Top 10 (2017): A6 - Security Misconfiguration
- CWE-16

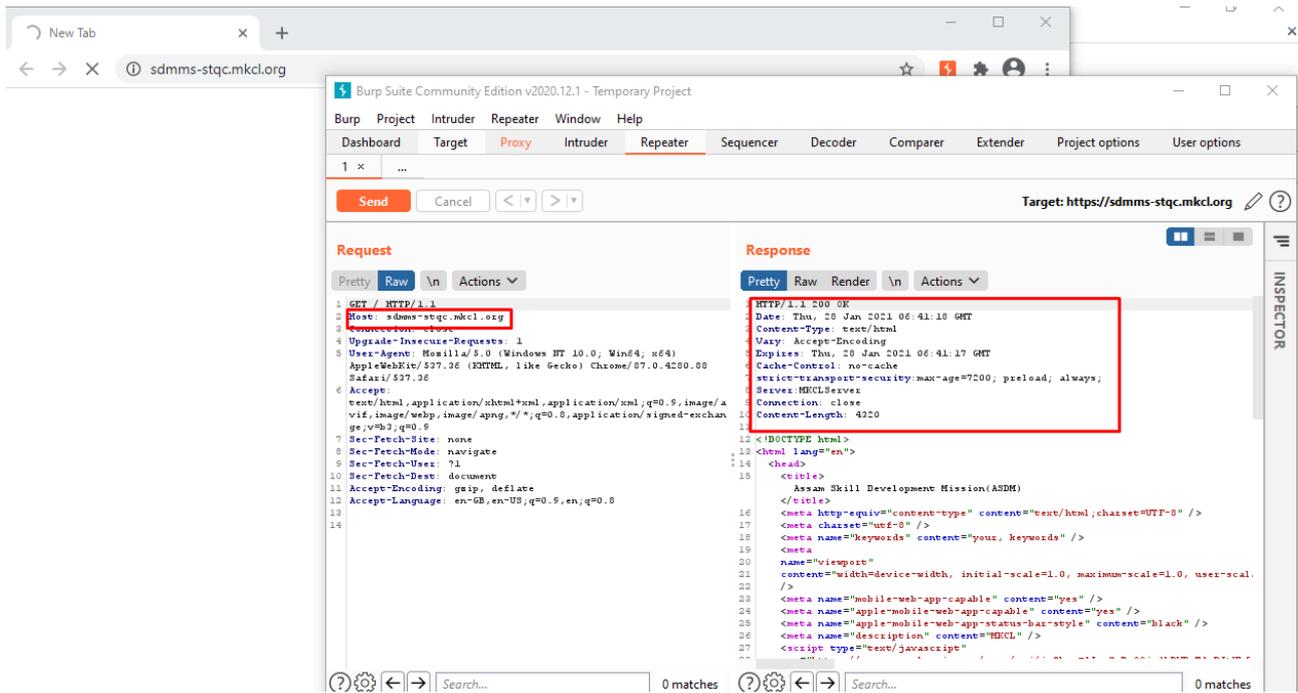
**Vulnerable Point(s):**

1. XSS protection header not defined

**Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
  1. Open browser
  2. Open burpsuite
  3. Start Intercepting the following url

**<https://sdmms-stqc.mkcl.org>**



#### 4. In Burp-suit Response there is no x-xss protection header not enabled

**Solution:** Configure your web server to include an 'X-XSS-Protection' header with a value of '1; mode=block' on all pages.

**Status:** Closed

BUG ID 12: X-Frame-Options Header Not Set

**Severity:** Low

**Description:** X-Frame-Options header is not included in the HTTP response to protect against 'ClickJacking' attacks.

**Reference Id(s):**

- CWE-16
- WASC-15

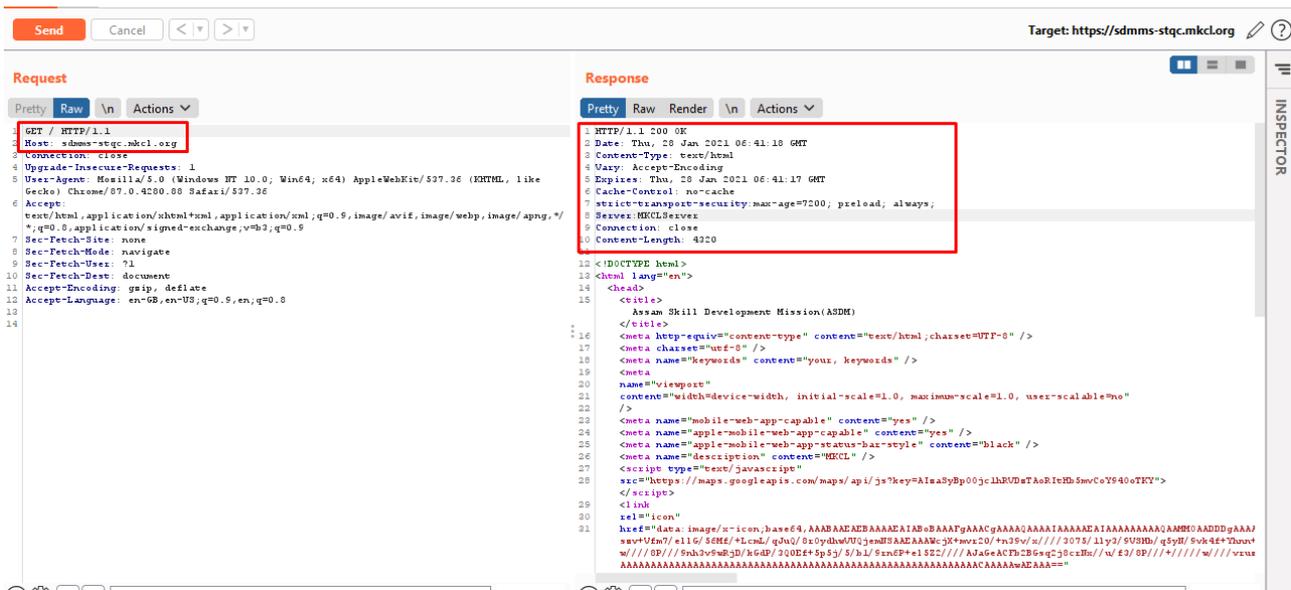
**Vulnerable Point(s):**

1. <https://sdmms-stqc.mkcl.org>

**Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
  1. Open burpsuite
  2. Open browser
  3. Start intercepting the following url

**<https://sdmms-stqc.mkcl.org>**



**Solution:** Most modern Web browsers support the X-Frame-Options HTTP header. Ensure it's set on all web pages returned by your site (if you expect the page to be framed only by pages on your server (e.g. it's part of a FRAMESET) then you'll want to use SAMEORIGIN, otherwise if you never expect the page to be framed, you should use DENY. ALLOW-FROM allows specific websites to frame the web page in supported web browser)

**Status:** Closed

BUG ID 13: Cross-Domain JavaScript Source File Inclusion

Severity: Low

Description: The page includes one or more script files from a third-party domain.

Reference Id(s):

- CWE-829
- WASC-15

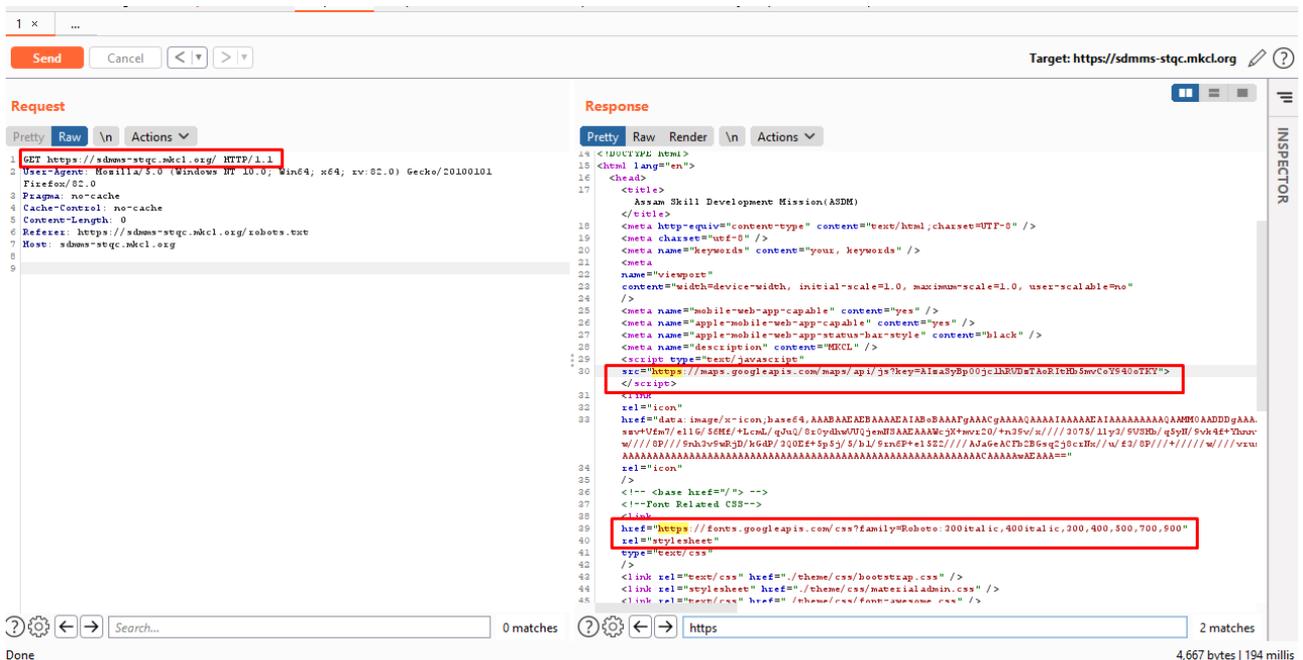
Vulnerable Point(s):

1. <https://sdmms-stqc.mkcl.org>

Proof of Concept(PoC):

- Proof of Concept of Vulnerable Point Number 1
1. Open browser
  2. Open burpsuite

3. Start intercepting the following url
4. Send to repeater and click go



**Solution:** Ensure JavaScript source files are loaded from only trusted sources, and the sources can't be controlled by end users of the application.

**Status:** Closed

## BUG ID 14: Browser Back Button Vulnerability

**Severity:** Low

**Description:** The web application is leaking sensitive information through the web browser's history. An attacker could steal this sensitive information using just the back button of the web browser, The back, forward and refresh buttons of the browser can be used to steal the password of a previous user, the back and forward buttons on the browser make use of this history to display the pages that the user visited recently

**Reference Id(s):**

- OWASP Top 10 2017: A2 (Broken Authentication)
- CWE-525, 287
- WASC-47

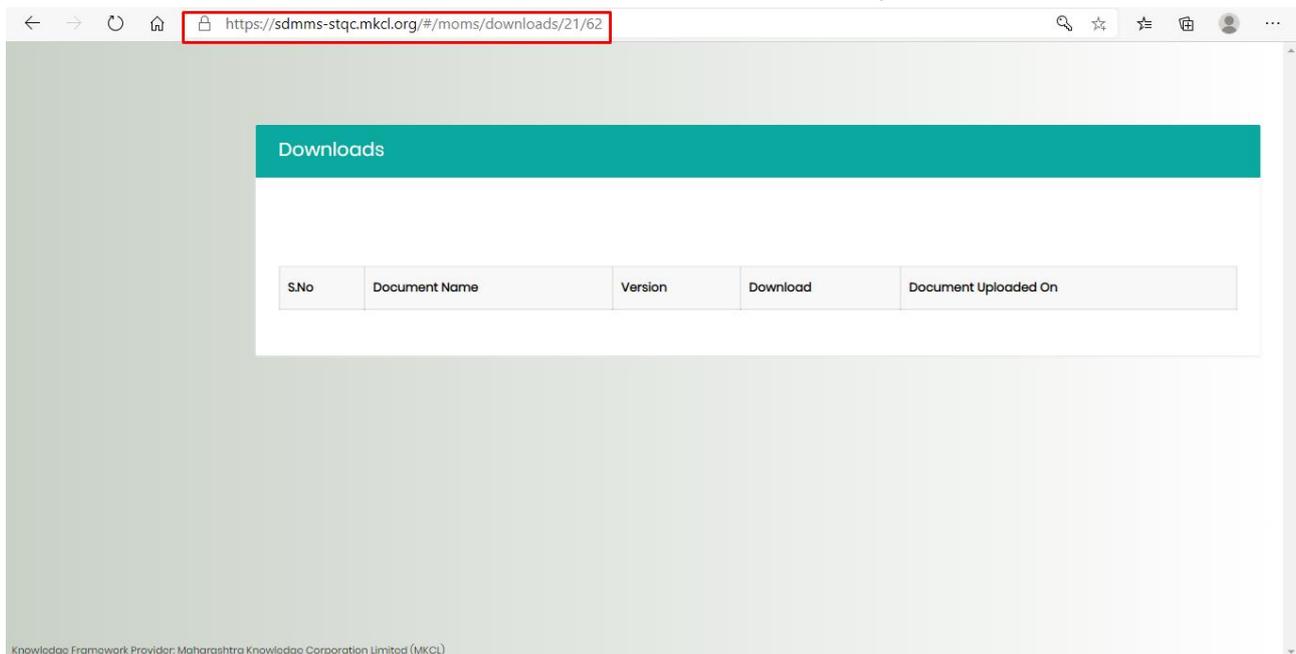
**Vulnerable Point(s):**

1. Browser Cache Weakness

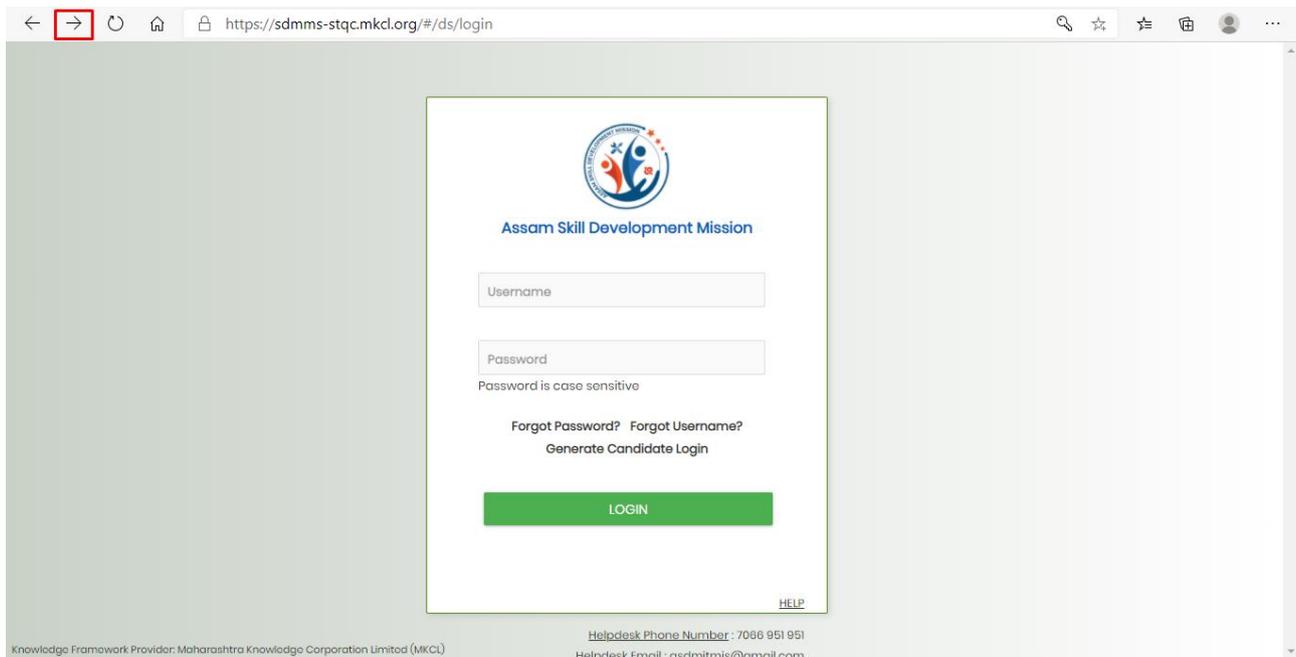
## Proof of Concept(PoC):

### ● Proof of Concept of Vulnerable Point Number 1

1. Open mozilla firefox
2. Open burpsuite
3. Open Asam skill development website
4. Enter credentials as usernam: maanyaj, password: test#123.
5. As User Dashboard is loaded or shown with appropriate user detail
6. If user wants to exit or quiet from application he will have to follow the Logout process as Logout option is also available.
7. As we can see the Back button is enabled or showing, we just press on Back button to check that session / Browser cache weakness vulnerability.



8. After press Back button on browser the application back the all request without any browser cache expire or no authentication required.



**Solution:** Make sure that the web page is always delivered over HTTPS.

- Use proper session management including session cookies/token/authentication.
- Set the Cache-control header with the “must-revalidate” attribute. This indicates that the browser should not use the information that is cached for that particular request–response pair.

**Status: Closed**

## **BUG ID 15: Cross Site Scripting Weakness (Reflected in JSON Response)**

**Severity:** Low

**Description:** Application is reflecting xss the payload injection in json response

**Reference Id(s):**

- CWE-79

**Vulnerable Point(s):**

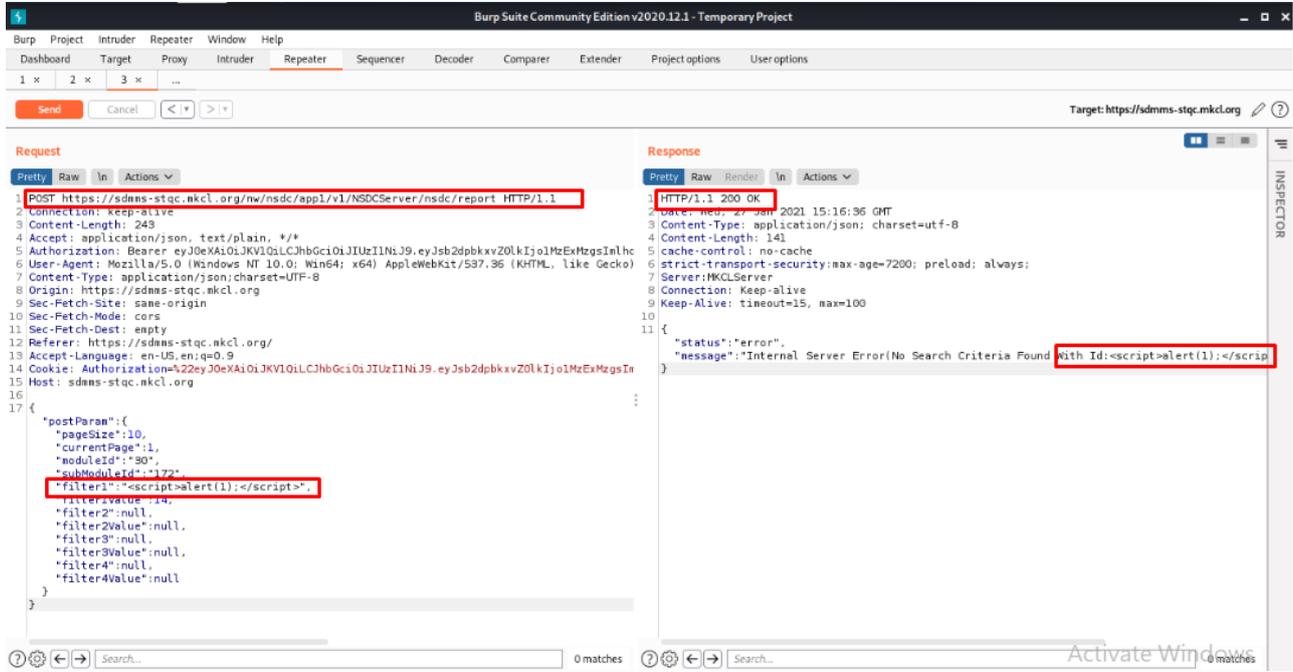
1. <https://sdmms-stqc.mkcl.org/nw/nsdc/app1/v1/NSDCServer/nsdc/report>

**Proof of Concept(PoC):**

- Proof of Concept of Vulnerable Point Number 1
  1. Open burpsuite
  2. Open mozilla firefox
  3. start intercepting the following url

<https://sdmms-stqc.mkcl.org/nw/nsdc/app1/v1/NSDCServer/nsdc/report>

4. We put the xss payload in filter and its we can see the response the payload injection we put that is reflecting



**Solution:** Use xss protection header option to sanitize input value

**Status:** Closed

## BUG ID 16: Embedded Open Type File Download

**Severity:** Low

**Description:** Application is allowing to download the Eot file form server, If the web application doesn't check the file name required by the user, any malicious user can exploit this vulnerability to download sensitive files from the server. Limit user from viewing or downloading files, a malicious user may attempt to view or download any file from your server. Attackers may construct malicious requests to download sensitive files from the server, and further embed website webshell files to control the website server host.

**Reference Id(s):**

- OWASP Top 10 (2017): A6 – Security Misconfiguration
- CWE-494
- WASC-14

**Vulnerable Point(s):**

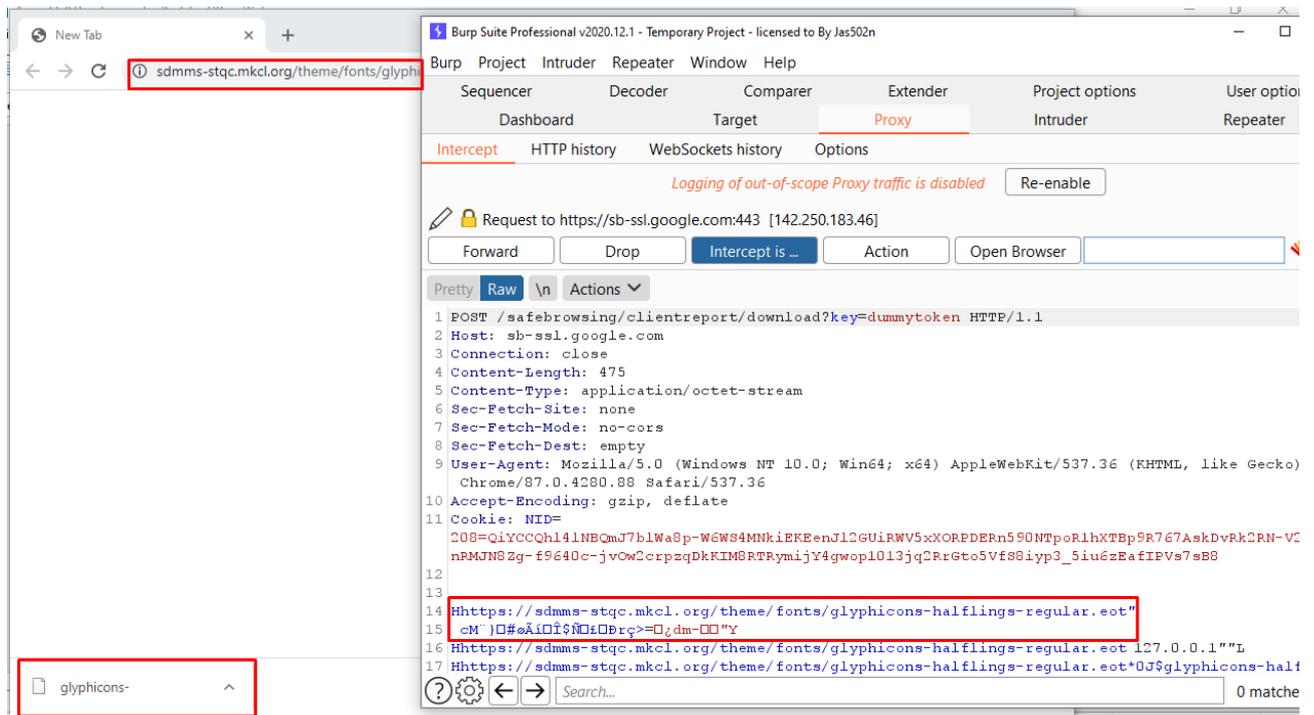
1. <https://sdmms-stqc.mkcl.org/theme/fonts/glyphicons-halflings-regular.eot>

## Proof of Concept(PoC):

### ● Proof of Concept of Vulnerable Point Number 1

1. Open mozilla firefox browser
2. Open the following url in browser

<https://sdmms-stqc.mkcl.org/theme/fonts/glyphicons-halflings-regular.eot>



## Solution:

Configure the web application to not to download any arbitrary file and eot file(s) from client side.

**Status: Closed**

BUG ID 17: Mixed content

**Severity: Low**

**Description:** The response is loaded over HTTPS, but loads other resources over an unencrypted connection. The following "passive" resource is loaded over HTTP. An attacker able to modify traffic could influence the application's appearance and behavior

The application loads pages over HTTPS that load other resources over unencrypted connections. An attacker suitably positioned to view a legitimate user's network traffic could record and monitor their interactions with these resources, which may indirectly disclose information about the user's activity on the application itself. Furthermore, an attacker able to modify traffic could alter these resources and potentially influence the application's

appearance and behavior. Due to these concerns, users' web browsers may automatically display warnings and disable affected components of the page. As a result, this vulnerability currently has more of an impact on usability than security.

### Reference Id(s):

- CWE-16

### Vulnerable Point(s):

1. <https://sdmms-stqc.mkcl.org/js/app.3c83760e04525f8942d8.bundle.js>

### Proof of Concept(PoC):

- Proof of Concept of Vulnerable Point Number 1
1. Open browser
  2. Open burpsuite
  3. Open the following url

<https://sdmms-stqc.mkcl.org/js/app.3c83760e04525f8942d8.bundle.js>

4. Start intercepting with burpsuite

The screenshot displays the Burp Suite interface. On the left, the 'Request' tab is active, showing a GET request to `https://sdmms-stqc.mkcl.org/js/app.3c83760e04525f8942d8.bundle.js?4bad7ebeb13ce3db7601`. The response on the right shows HTML content with a vulnerable `<img src='http://www.gravatar.com/avatar/{hash}' alt='Description' />` tag. A search bar at the bottom of the response pane shows a search for `g src='http://www.gravatar.com/avatar|'` with 1 match.

5. Right click send repeater click send

### Solution:

Ensure that all external resources the page references are loaded using HTTPS.

**Status: Closed**

Note: If any changes required in report or in testing, please let us know within 7 days of final report submitting, after 7 days, we will consider, it will auto accept no changes required.