

Experiment no. 7

Aim: To perform Web Security Testing

Objectives: To understand about Web Security Testing

Outcomes: The learner will be able to understand Web Security Testing and simulate using Tools

Hardware / Software Required: Burpsuite

Theory:

Web application security testing is the process of testing, analyzing and reporting on the security level and/or posture of a Web application. It is used by Web developers and security administrators to test and gauge the security strength of a Web application using manual and automated security testing techniques.

Web application security testing is a broad process that includes a multitude of processes that enable security testing of a Web application. It is a systematic process that starts from identifying and scoping the entire application, followed by planning multiple tests.

Typically, Web application security testing is performed after the Web application is developed. The Web application undergoes a rigorous testing process that includes a series of fabricated malicious attacks to see how well the Web application performs/responds. The overall security testing process is generally followed by a format report that includes the identified vulnerabilities, possible threats and recommendations for overcoming the security shortfalls.

Some of the processes within the testing process include:

- Brute force attack testing
- Password quality rules
- Session cookies
- User authorization processes
- SQL injection

Mention about the Tool used

Output: Include Screenshots of the Tool used

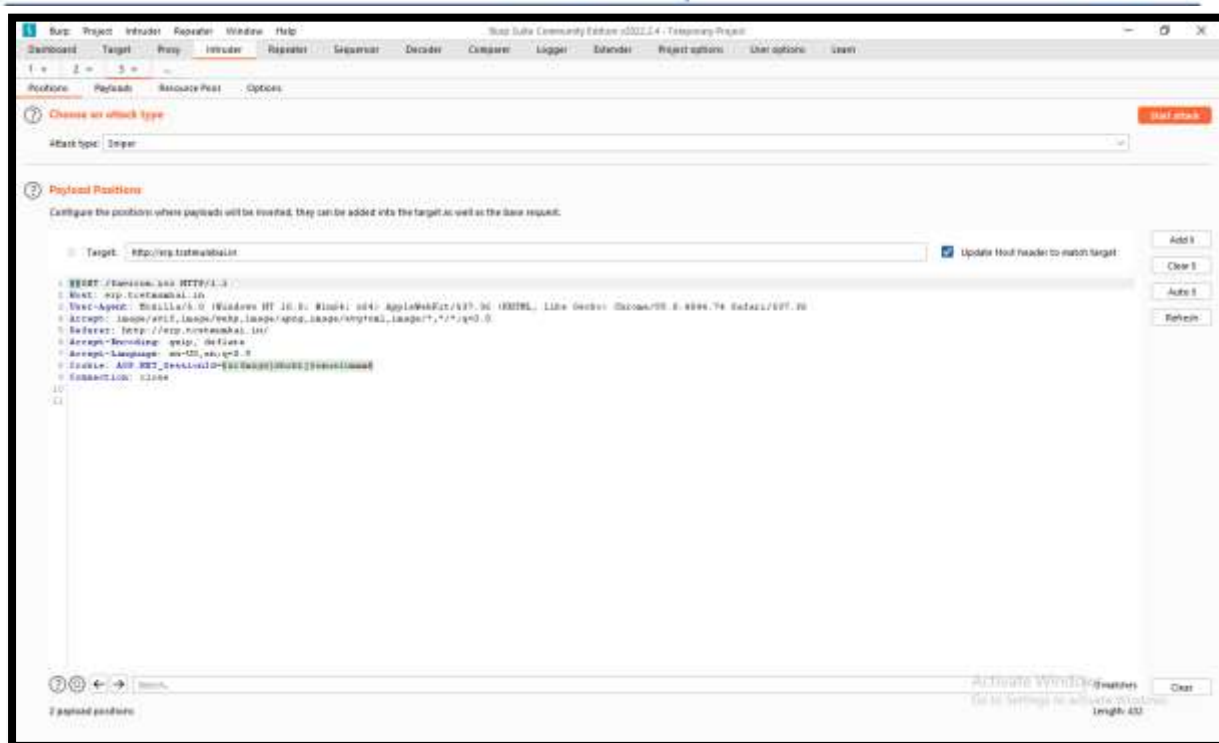
The screenshot shows the Wireshark interface with a list of captured packets. The selected packet is a GET request to `http://erp.tcetmumbai.in/fonts/fontawesome-webfont.woff2?v=4.7.0`. The detailed view shows the raw data and the parsed HTTP request structure, including headers like `Host: erp.tcetmumbai.in`, `User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36`, and `Cookie: ASP.NET_SessionId=zr fmzgwgjwhxhtj5smuelummm`.

The screenshot shows the NetworkMiner tool interface. The top bar displays the request: `GET request to http://erp.tcetmumbai.in/fonts/fontawesome-webfont.woff2?v=4.7.0`. The main area shows the request details in a structured format:

```

1 GET /fonts/fontawesome-webfont.woff2?v=4.7.0 HTTP/1.1
2 Host: erp.tcetmumbai.in
3 Origin: http://erp.tcetmumbai.in
4 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
  (KHTML, like Gecko) Chrome/99.0.4844.74 Safari/537.36
5 Accept: */*
6 Referer: http://erp.tcetmumbai.in/css/font-awesome.min.css
7 Accept-Encoding: gzip, deflate
8 Accept-Language: en-US,en;q=0.9
9 Cookie: ASP.NET_SessionId=zr fmzgwgjwhxhtj5smuelummm
10 Connection: close
  
```

At the bottom, there is a search bar with the text "Search..." and a result count of "0 matches".



Learning Outcomes: The student will be able to

LO1: Understand and simulate Web Security Testing

LO2: Understand the use of Web Security Testing

Course Outcomes: Upon completion of the course students will be able to understand and simulate Web Security Testing

Conclusion: We were able to understand Web Security Testing and simulate using various tools.

For Faculty Use

Correction Parameters	Formative Assessment [40%]	Timely completion of Practical [40%]	Attendance / Learning Attitude [20%]	
Marks Obtained				