

Module 5- Computer Systems (2021-22)

Project

UNIVERSITY OF TWENTE.

Testing-Security by Design Checklist

Team ID:31	Team Members: Damon Kaewborisut Niek Zieverink Masis Zovikoglu Shuhang Tian Yifan Sun Jelke Schröder
Project Name: Raspberry Home	Mentor(s): Filip Ivanov Ricco Pratama Halim

Instructions:

1. Refer to the below table. All the mentioned points are mandatory to perform for your application except point no. 4.
2. You should consider atleast 2 vulnerabilities for each criteria given in Column 'B', except point no. 4, 6, and 7.
3. The mitigation plan/solution should be considered for every identified vulnerability.
4. Make sure to review the document with your team members and mentor(s) before final submission.
5. This checklist should be in lined and submitted along with the Software Testing document.

Points	Source Code Review, Static and Dynamic Application Testing	Identified Vulnerabilities for testing (Name them)	Put tick ✓ (if you have completed all the points as mentioned in Column 1.	Remarks, if any
1	Application security vulnerabilities (e.g. Access Control, Injection, Authentication, Cross Site scripting, etc.)	Brute force XSS attack SQL injection		User can only try incorrect password for 5 times. Need to use prepared statement to prevent SQL injection
2	Weak security in functions (e.g. old encryption techniques, Hashing, Privileges assigned, Function error, etc.)	We use SHA-512 which is quite safer than previous hash algorithm like MD5 We will use SHA-512 with salt and peper to prevent rainbow table attack		We finished the Hash function today so the test is not implemented yet.
3	Duplicate/unnecessary functions	User cannot receive broadcast messages The light cannot be turn-on/off automatically		

4	Analyzing Program (e.g. computation time, power consumption, etc.) (Optional)	-		
5	Address the remaining vulnerabilities of your application (manual)	We finished the Hash function today so the test is not implemented yet. XSS attack		
6	Make a mitigation plan/solution by listing down the vulnerabilities	-		
7	Review with your team members and approve by your mentor(s).	-		

Team members reviewed: (Member 1, Yes), (Member 2, Yes),...

Mentor(s) reviewed and verified: (Mentor 1, Yes), (Mentor 2, Yes), ...

Prepared by:
Dipti K. Sarmah (Project Coordinator)