Final Security Test Specification and Tools Report Mobile Plataform Hybrid Application Application domain type m-Social Networking Authentication Biometric-based authentication; Factors-based authentication; ID-based Authentication schemes Has DB Yes SQL Type of data storage Which DB Type of data stored Personal Information; Confidential Data; Critical Data User Registration Type of Registration The users will register themselves **Programming Languages** PHP: HTML5: Javascript Input Forms **Upload Files** Yes The system has logs Yes The system has regular updates Yes The system has third-party Yes System Cloud Environments Public Cloud Hardware Specification Yes **HW Authentication** Basic Authentication (user/pass) **HW Wireless Tech** 5G; GSM (2G); Bluetooth; Wi-Fi; 3G; 4G/LTE **Data Center Phisical Access** Mobile Plataform Hybrid Application; Android App; IoT System Application domain type **Smart Home** Authentication Biometric-based authentication; Factors-based authentication; ID-based Authentication schemes authentication; ID-based authentication Has DB Yes Distributed Storage Type of data storage Which DB **SQLite** Personal Information; Confidential Data; Critical Data; Personal Information; Type of data stored Confidential Data User Registration Type of Registration The users will register themselves Programming Languages PHP; HTML5; Javascript; C/C++; Java Input Forms Yes Upload Files Yes The system has logs Yes The system has regular updates Yes The system has third-party Yes Hybrid Cloud System Cloud Environments Hardware Specification Yes **HW Authentication** Basic Authentication (user/pass) 5G; GSM (2G); Bluetooth; Wi-Fi; 3G; 4G/LTE; 3G; 4G/LTE; 5G; Bluetooth; **HW Wireless Tech** Wi-Fi Data Center Phisical Access Yes Mobile Plataform Hybrid Application; Android App; IoT System Application domain type **Smart Home** Authentication Biometric-based authentication; Factors-based authentication; ID-based Authentication schemes authentication; ID-based authentication Has DR Yes Type of data storage Distributed Storage Which DB **SQLite** Personal Information; Confidential Data; Critical Data; Personal Information; Type of data stored Confidential Data User Registration

Type of Registration

Programming Languages Input Forms

Upload Files The system has logs The system has regular updates The system has third-party System Cloud Environments

Hardware Specification **HW Authentication**

Basic Authentication (user/pass)

The users will register themselves

Yes

Yes

Yes

Yes

Yes

Yes

Hybrid Cloud

PHP; HTML5; Javascript; C/C++; Java

HW Wireless Tech

Data Center Phisical Access

Wi-Fi Yes

In order to avoid or prevent Botnet, DoS and DDoS Attacks, the following security tests should be performed.

Test Parameter	Testing Types	Testing Methods	Tools		
			Both	Android	iOS
Add-ons	White Box	Static Analysis via Forensic Mobile		Addons Detector	
DoS, DDoS Attacks	Black Box	Dinamic Analysis via Penetration Test	NMAP, SlowBot Net, MetaSploit, LOIC and Kal Linux	li	

In order to avoid or prevent Botnet, DoS, DDoS, Eavesdropping, Phishing, MITM, Spoofing and Sniffing Attacks, the following security tests should be performed.

Test Parameter	Testing Types	Testing Methods		Tools	
			Both	Android	iOS
Mobile decryption,	White Box	Static Analysis via Test		Doy2ior	Clutch
unpacking & conversion	white Box	Penetration		Dex2jar	Ciulcii
Secure backup and	Grey Box	Dinamica Analysis via		adb	
logging	Grey Box	Proxies		aub	
Data leakage and Breach	Grey Box	Dinamic analysis via	Wireshark	tPacketCapturepro,	
Data leakage and breach		Proxies		AFWall+,	
	Grey Box White Box	Dinamic Analysis via	VASTO		
		Penetration Testing			
		Dnamic Analysis via	Webfuzz, SPI Fuzzer,		
		Stressing Testing (fuzzing	g) Wfuzz		

In order to avoid or prevent Sniffing, Eavesdropping, Botnet, Phishing and Spoofing Attacks, the following security tests should be performed.

Test Parameter	Testing Types	Testing Methods	Tools			
			Both	Android	iOS	
Use of encryption	White Box	Static Analysis via Forensic Mobile	OpenSSL			
			Acunetix, Web3af, Nikto,			
Poor use of certificate	Grey Box	Dinamic analysis via	IBM Security AppScan			
parameters		Vulnerability Scanner	Standard and HP			
			WebInspect			
	Croy Boy	Dinamic Analysis via	TCPDump, Wireshak		idb tool	
	Grey Box	Penetration Test			IOD TOOI	
Secure backup and	5 5	Dinamic Analysis via		11-		
logging	Black Box	Proxies		adb		

In order to avoid or prevent Botnet, Spoofing and Sniffing attacks, the following security tests should be performed.

Test Parameter	Testing Types	Testing Methods	Tools			
rest i arameter	resuing rypes	resting wethous	Both	Android	iOS	
Exploit Database Vulnerabilities	White Box	Manual Dinamic Analysis via Penetration Test	SQLite browser		Xcode	
Proper SSL usage and Use of encryption	Black Box	Dinamic Analysis via Proxies	WebScarab			
Database frangibility	Grey Box	Dinamic Analisys via	Database Scanner of Internet Security Systems			
scanner	•	Vulnerability Scanner	Co. and MetaCortex			
E: 15	White Box	Static Analysis via	FindBugs, BugScan of			
Find Bugs		Bytecode Scanner	LogicLab Co.			
	White Box	Static Analysis via source	C++Test, RATS, C Code			
	code Analy		Analyzer(CCA)			
	White Box	Static Analysis via Binary	BugScan of Logi- cLab Co).		
		code Scanner	and Fx- Cop;BugScam			
Input validation of user		Manual Dinamic Analysis				
SID	Grey Box	Checking input fields in				
OID		GUI				
Runtime manipulation:	Grey Box	Static Analysis via Test	Cydia Substrate		Cycript	
code injection, patching	0.0, D0A	Penetration	Cyala Caballato		O) on pt	

In order to avoid or prevent Malicious Insider and VM-Migration attacks, the following security tests should be performed.

Toot Dovementor	Tastina Tunas	Taatina Mathada		Tools		
Test Parameter	Testing Types	Testing Methods	Both	Android	iOS	

Input validation Grey Box Static Analysis via Slueth Kit+Autopsy AndroGuard, Drozer, Forensic Mobile Browser apktool, Amandroid

In order to avoid or prevent Malware injection and Side-channel Attacks, the following security tests should be performed.

Test Parameter	Testing Types	Testing Methods	Tools			
			Both	Android	iOS	
D	White Box	Static Analysis via	BlackBag Blacklight,	AndroGuard, Drozer,		
Debug flag		Forensic Mobile	Encase forensics	FindBugs, Andriller		
Cantant nuovidana	White Box	Static Analysis via	Slueth Kit+Autopsy	AndroGuard, Drozer,		
Content providers		Forensic Mobile	Browser	apktool		
Cada avality	White Box	Static Analysis via Byte-	FindBugs, BugScan of			
Code quality		code Scanner	LogicLab Co.			
	White Box	Static Analysis via source	C++Test, RATS, C Code			
		code Analyser	Analyzer(CCA)			
	White Box	Static Analysis via source	BugScan of LogicLab Co.			
		code Analyser	and Fx- Cop, BugScam		class-dump-z	

In order to avoid or prevent *physical attacks*, the following security tests should be performed.

Test Parameter	Test Method			Tools		
	Test Approach	Bot	Both	Android	iOS	
Debug flag, Content	White Box	Static Analysis via		AndroGuard, Drozer,		
providers, Code quality	Writte Box	Forensic Mobile		FindBugs		
Leak, Breach and data		Manual Dinamic Analysis	3			
,	Black Box	Checking input fields from	n			
Loss		device and GUI				