MOBSF

ANDROID STATIC ANALYSIS REPORT

Diva (1.0)

File Name:	base.apk
Package Name:	jakhar.aseem.diva
Scan Date:	April 11, 2022, midnight
App Security Score:	38/100 (HIGH RISK)
Grade:	

FINDINGS SEVERITY

HIGH	MEDIUM	INFO	SECURE	HOTSPOT
4	6	1	1	1

FILE INFORMATION

File Name: base.apk
Size: 1.43MB
MD5: 82ab8b2193b3cfb1c737e3a786be363a
SHA1: 27e849d9d7b86a3a3357fb3e980433a91d416801
SHA256: 5cefc51fce9bd760b92ab2340477f4dda84b4ae0c5d04a8c9493e4fe34fab7c5

APP INFORMATION

App Name: Diva
Package Name: jakhar.aseem.diva
Main Activity: jakhar.aseem.diva.MainActivity
Target SDK: 23
Min SDK: 15
Max SDK:
Android Version Name: 1.0
Android Version Code: 1

APP COMPONENTS

Activities: 17
Services: 0
Receivers: 0
Providers: 1
Exported Activities: 2
Exported Services: 0
Exported Receivers: 0
Exported Providers: 1

CERTIFICATE INFORMATION

APK is signed
v1 signature: True
v2 signature: False
v3 signature: False
Found 1 unique certificates
Subject: C=US, O=Android, CN=Android Debug
Signature Algorithm: rsassa_pkcs1v15
Valid From: 2015-11-02 08:32:11+00:00
Valid To: 2045-10-25 08:32:11+00:00
Issuer: C=US, O=Android, CN=Android Debug
Serial Number: 0x218330df
Hash Algorithm: sha256
md5: d620162ac34ee974d7fd3a1862e7e4df
sha1: ae4ead5aeaba4e9e4fc928e7c7f7fd459f008031
sha256: 35d7f7ad35dfb826b70fa4b73187ed478540e32c8b8c5653b86568029fcd5840
sha512: e936169585893a7a248e393ddb296b2101432de5b07c3d7e2bdc8070dc0b58277b46e443eff3730b4f5a25b61f78c9078f54cc325cb86c17160b5bae13148d1e

TITLE	SEVERITY	DESCRIPTION
Signed Application	info	Application is signed with a code signing certificate

TITLE	SEVERITY	DESCRIPTION
Application vulnerable to Janus Vulnerability	high	Application is signed with v1 signature scheme, making it vulnerable to Janus vulnerability on Android 5.0-8.0, if signed only with v1 signature scheme. Applications running on Android 5.0-7.0 signed with v1, and v2/v3 scheme is also vulnerable.
Application signed with debug certificate	high	Application signed with a debug certificate. Production application must not be shipped with a debug certificate.

APPLICATION PERMISSIONS

PERMISSION	STATUS	INFO	DESCRIPTION
android.permission.WRITE_EXTERNAL_STORAGE	dangerous	read/modify/delete external storage contents	Allows an application to write to external storage.
android.permission.READ_EXTERNAL_STORAGE	dangerous	read external storage contents	Allows an application to read from external storage.
android.permission.INTERNET	normal	full Internet access	Allows an application to create network sockets.

APKID ANALYSIS

FILE	DETAILS

FILE	DETAILS
classes.dex	<table><tr><th>FINDINGS</th><th>DETAILS</th></tr><tr><td>Compiler</td><td>dx (possible dexmerge)</td></tr><tr><td>Manipulator Found</td><td>dexmerge</td></tr></table>

NETWORK SECURITY

NO	SCOPE	SEVERITY	DESCRIPTION

MANIFEST ANALYSIS

NO	ISSUE	SEVERITY	DESCRIPTION
1	Debug Enabled For App [android:debuggable=true]	high	Debugging was enabled on the app which makes it easier for reverse engineers to hook a debugger to it. This allows dumping a stack trace and accessing debugging helper classes.
2	Application Data can be Backed up [android:allowBackup=true]	warning	This flag allows anyone to backup your application data via adb. It allows users who have enabled USB debugging to copy application data off of the device.

NO	ISSUE	SEVERITY	DESCRIPTION
3	Activity (jakhar.aseem.diva.APICredsActivity) is not Protected. An intent-filter exists.	warning	An Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. The presence of intent-filter indicates that the Activity is explicitly exported.
4	Activity (jakhar.aseem.diva.APICreds2Activity) is not Protected. An intent-filter exists.	warning	An Activity is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device. The presence of intent-filter indicates that the Activity is explicitly exported.
5	Content Provider (jakhar.aseem.diva.NotesProvider) is not Protected. [android:exported=true]	high	A Content Provider is found to be shared with other apps on the device therefore leaving it accessible to any other application on the device.

</> CODE ANALYSIS

NO	ISSUE	SEVERITY	STANDARDS	FILES

NO	ISSUE	SEVERITY	STANDARDS	FILES
1	The App logs information. Sensitive information should never be logged.	info	CWE: CWE-532: Insertion of Sensitive Information into Log File OWASP MASVS: MSTG-STORAGE-3	jakhar/aseem/diva/InsecureDataStorage2Activity.java jakhar/aseem/diva/LogActivity.java jakhar/aseem/diva/AccessControl1Activity.java jakhar/aseem/diva/AccessControl2Activity.java jakhar/aseem/diva/SQLInjectionActivity.java jakhar/aseem/diva/InsecureDataStorage3Activity.java jakhar/aseem/diva/InsecureDataStorage4Activity.java
2	App uses SQLite Database and execute raw SQL query. Untrusted user input in raw SQL queries can cause SQL Injection. Also sensitive information should be encrypted and written to the database.	warning	CWE: CWE-89: Improper Neutralization of Special Elements used in an SQL Command ('SQL Injection') OWASP Top 10: M7: Client Code Quality	jakhar/aseem/diva/InsecureDataStorage2Activity.java jakhar/aseem/diva/NotesProvider.java jakhar/aseem/diva/SQLInjectionActivity.java
3	App creates temp file. Sensitive information should never be written into a temp file.	warning	CWE: CWE-276: Incorrect Default Permissions OWASP Top 10: M2: Insecure Data Storage OWASP MASVS: MSTG-STORAGE-2	jakhar/aseem/diva/InsecureDataStorage3Activity.java
4	App can read/write to External Storage. Any App can read data written to External Storage.	warning	CWE: CWE-276: Incorrect Default Permissions OWASP Top 10: M2: Insecure Data Storage OWASP MASVS: MSTG-STORAGE-2	jakhar/aseem/diva/InsecureDataStorage4Activity.java

SHARED LIBRARY BINARY ANALYSIS

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
1	lib/x86_64/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	False high This shared object does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option -fstack-protector-all to enable stack canaries.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
2	lib/armeabi-v7a/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	False high This shared object does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option -fstack-protector-all to enable stack canaries.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
3	lib/mips/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	False high This shared object does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option -fstack-protector-all to enable stack canaries.	No RELRO high This shared object does not have RELRO enabled. The entire GOT (.got and .got.plt both) are writable. Without this compiler flag, buffer overflows on a global variable can overwrite GOT entries. Use the option -z,relro,-z,now to enable full RELRO and only -z,relro to enable partial RELRO.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
4	lib/arm64-v8a/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	False high This shared object does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option -fstack-protector-all to enable stack canaries.	No RELRO high This shared object does not have RELRO enabled. The entire GOT (.got and .got.plt both) are writable. Without this compiler flag, buffer overflows on a global variable can overwrite GOT entries. Use the option -z,relro,-z,now to enable full RELRO and only -z,relro to enable partial RELRO.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
5	lib/x86/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	True info This shared object has a stack canary value added to the stack so that it will be overwritten by a stack buffer that overflows the return address. This allows detection of overflows by verifying the integrity of the canary before function return.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
6	lib/armeabi/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	False high This shared object does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option -fstack-protector-all to enable stack canaries.	Full RELRO info This shared object has full RELRO enabled. RELRO ensures that the GOT cannot be overwritten in vulnerable ELF binaries. In Full RELRO, the entire GOT (.got and .got.plt both) is marked as read-only.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	SHARED OBJECT	NX	STACK CANARY	RELRO	RPATH	RUNPATH	FORTIFY	SYMBOLS STRIPPED
7	lib/mips64/libdivajni.so	False high The shared object does not have NX bit set. NX bit offer protection against exploitation of memory corruption vulnerabilities by marking memory page as non-executable. Use option --noexecstack or -z noexecstack to mark stack as non executable.	False high This shared object does not have a stack canary value added to the stack. Stack canaries are used to detect and prevent exploits from overwriting return address. Use the option -fstack-protector-all to enable stack canaries.	No RELRO high This shared object does not have RELRO enabled. The entire GOT (.got and .got.plt both) are writable. Without this compiler flag, buffer overflows on a global variable can overwrite GOT entries. Use the option -z,relro,-z,now to enable full RELRO and only -z,relro to enable partial RELRO.	False info The shared object does not have run-time search path or RPATH set.	False info The shared object does not have RUNPATH set.	False warning The shared object does not have any fortified functions. Fortified functions provides buffer overflow checks against glibc's commons insecure functions like strcpy, gets etc. Use the compiler option -D_FORTIFY_SOURCE=2 to fortify functions.	True info Symbols are stripped.

NO	IDENTIFIER	REQUIREMENT	FEATURE	DESCRIPTION
1	FCS_STO_EXT.1.1	Security Functional Requirements	Storage of Credentials	The application does not store any credentials to non-volatile memory.
2	FCS_CKM_EXT.1.1	Security Functional Requirements	Cryptographic Key Generation Services	The application generate no asymmetric cryptographic keys.
3	FDP_DEC_EXT.1.1	Security Functional Requirements	Access to Platform Resources	The application has access to ['network connectivity'].
4	FDP_DEC_EXT.1.2	Security Functional Requirements	Access to Platform Resources	The application has access to no sensitive information repositories.
5	FDP_NET_EXT.1.1	Security Functional Requirements	Network Communications	The application has user/application initiated network communications.
6	FDP_DAR_EXT.1.1	Security Functional Requirements	Encryption Of Sensitive Application Data	The application implement functionality to encrypt sensitive data in non-volatile memory.
7	FMT_MEC_EXT.1.1	Security Functional Requirements	Supported Configuration Mechanism	The application invoke the mechanisms recommended by the platform vendor for storing and setting configuration options.
8	FTP_DIT_EXT.1.1	Security Functional Requirements	Protection of Data in Transit	The application does not encrypt any data in traffic or does not transmit any data between itself and another trusted IT product.

DOMAIN MALWARE CHECK

DOMAIN	STATUS	GEOLOCATION
payatu.com	ok	**IP:** 172.67.213.57 **Country:** Japan **Region:** Tokyo **City:** Tokyo **Latitude:** 35.689507 **Longitude:** 139.691696 **View:** Google Map

HARDCODED SECRETS

POSSIBLE SECRETS
"pkey" : "notespin"

Report Generated by - MobSF v3.5.2 Beta

Mobile Security Framework (MobSF) is an automated, all-in-one mobile application (Android/iOS/Windows) pen-testing, malware analysis and security assessment framework capable of performing static and dynamic analysis.