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Advanced Cyber Security (ACS)

Lab – Hacking Mobile Platform

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A mobile device allows communication between users on radio frequencies. It can also be used to send multimedia content, email, and do much more using the Internet.

Task 1: Securing Android Devices from Malicious Applications

Malwarebytes Security app provides full functionality to protect your Android device. Using up-to-the-minute intelligence, you can scan your apps on demand or at the interval of your choice.

Lab Scenario

Android's growing popularity has led to increased security threats, ranging from typical malware to advanced phishing and ID theft techniques. Many security software companies have launched their security apps to help Android users to deal with these issues that will cover all requirements including a group of complete security suites with anti-theft capabilities.

The penetration tester will scan for any unsecured settings your device may have and will advise accordingly. The Privacy Advisor, on the other hand, scans and lists all the installed apps and categorizes them under three categories: apps that may cause costs, apps that may harm your privacy and apps that may access the Internet. You can sort the categories to your own needs using the icons at the bottom. The Spam Protection is a straightforward yet effective call, and SMS filter, and the recently added App Protection will lock any app you want with an alphanumeric password.

Lab Objectives

The objective of this lab is to help students learn to:

- How to scan for malicious applications and files on Android mobile devices
- How to uninstall malicious applications
- How to delete the malicious files

Pre- Activity exercise

To carry out the lab, you need:

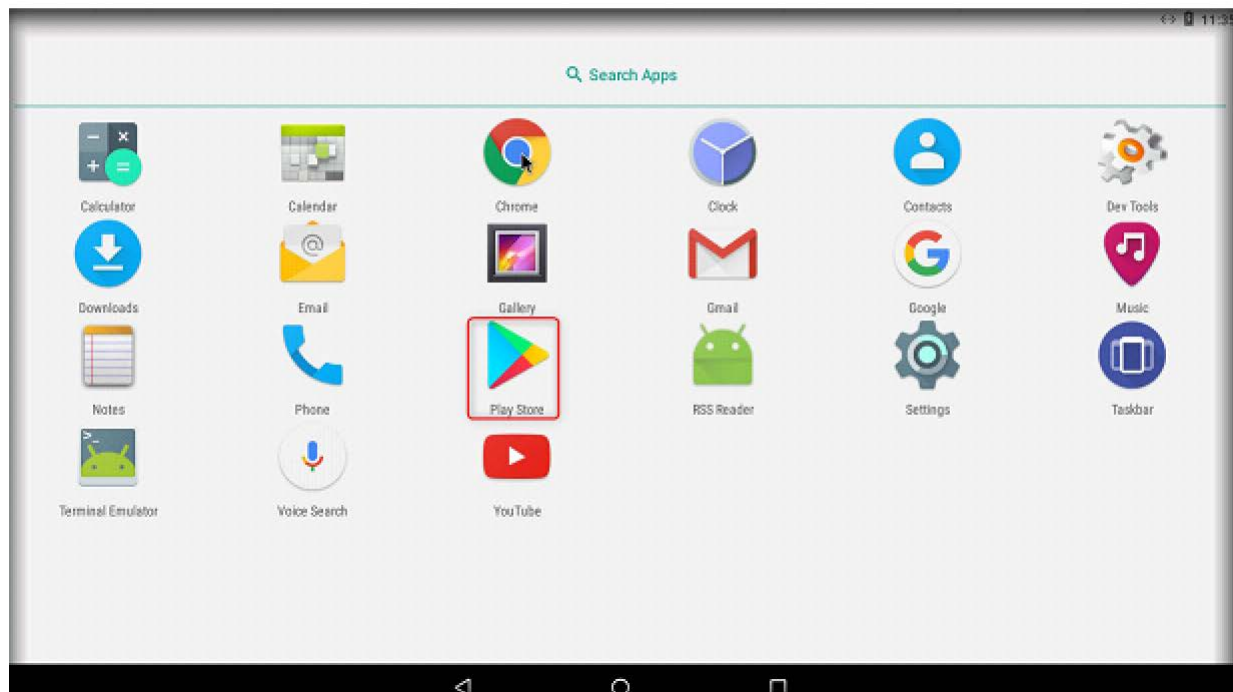
- Android emulator running on virtual machine
- A web browser with Internet access
- Administrative privileges to run tools

Overview of Lab

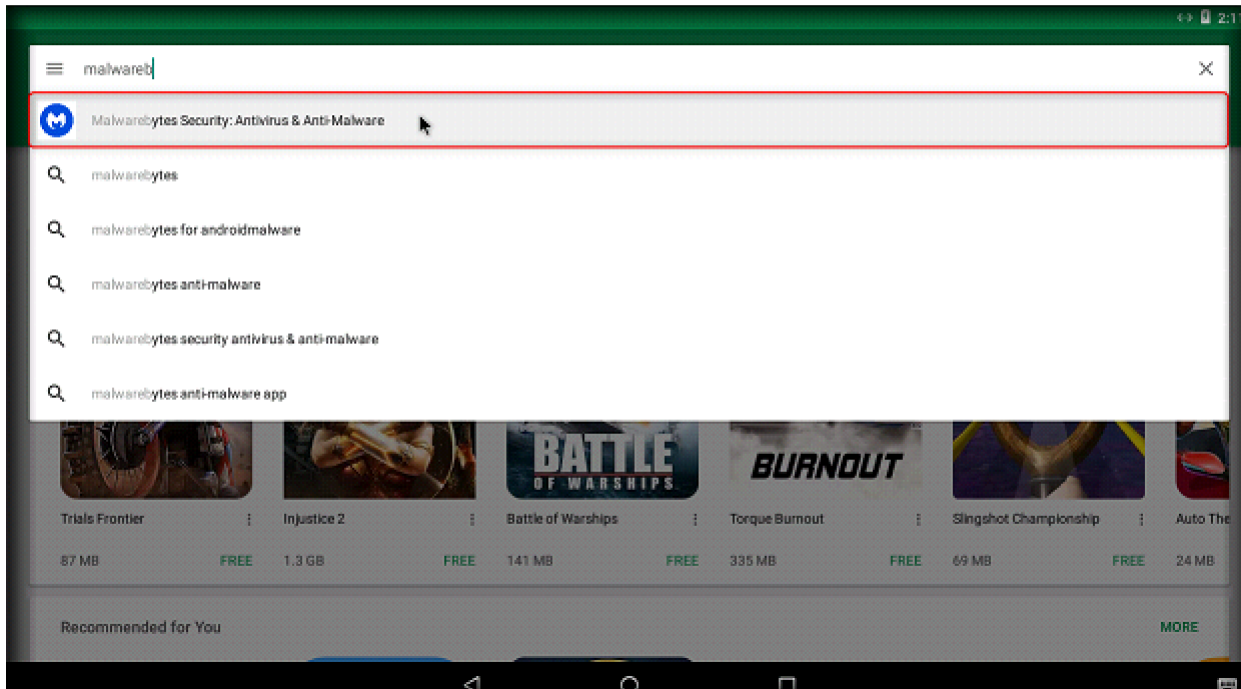
Malwarebytes Security automatically scans apps as you install them. This anti-virus functionality helps you to avoid unwanted software which can lead to data loss and unexpected costs. It also protects your device from attacks via USSD or other special codes. Moreover, if your device is lost or stolen, a remote lock or wipe will shield your personal information from prying eyes.

Activity:

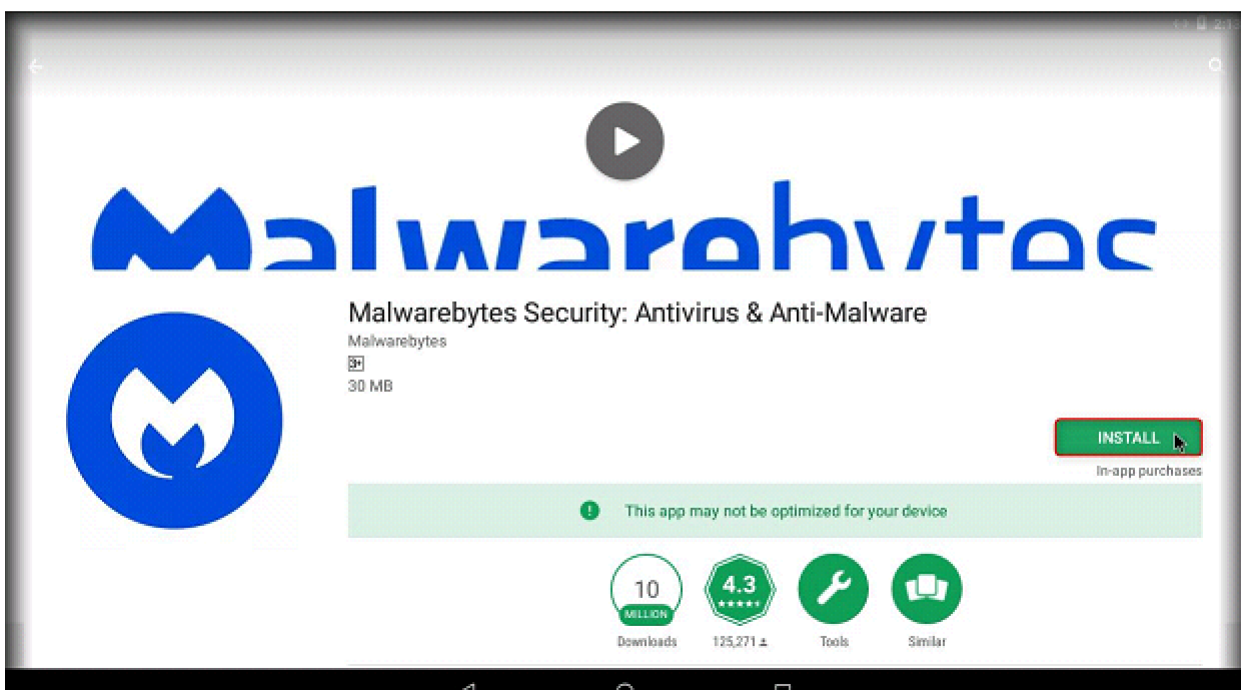
1. Launch **Android** Emulator and click **Play Store** icon on the Home Screen.
2. Make sure that **google** account has added it to the Play Store; if not, create a new one and add the account.



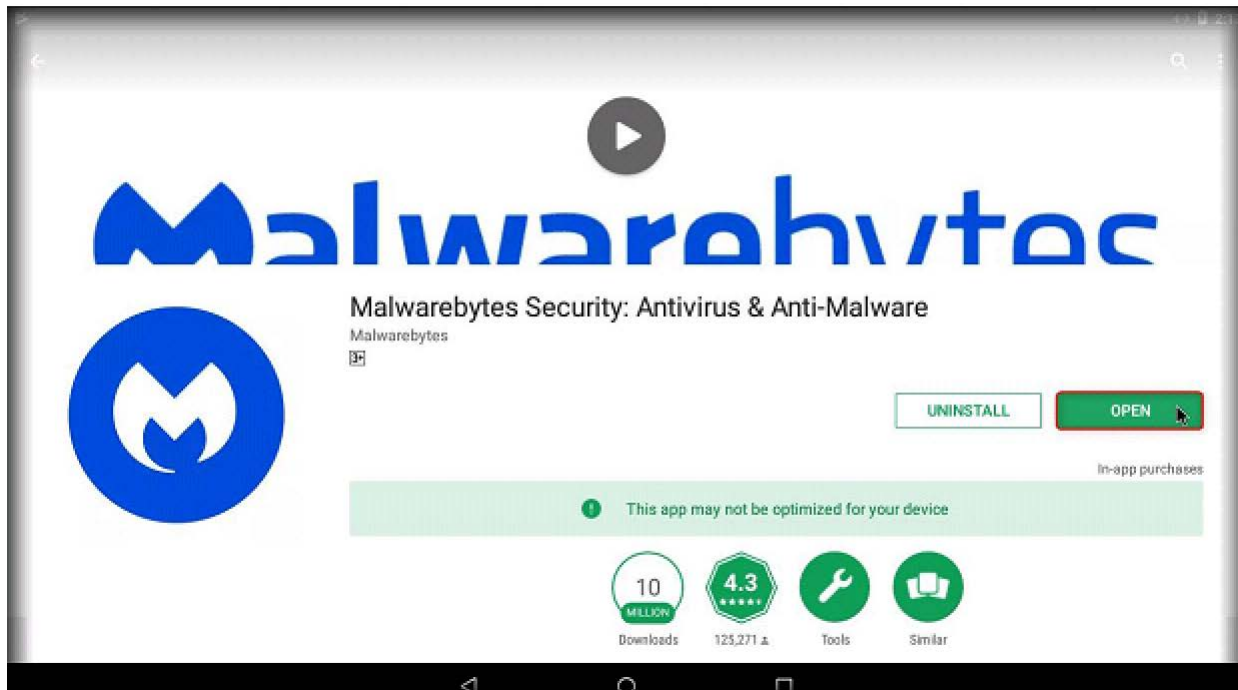
3. In the Play Store search bar, type **Malwarebytes Security** and select **Malwarebytes Security: Antivirus & Anti-Malware**, as shown in the screenshot.



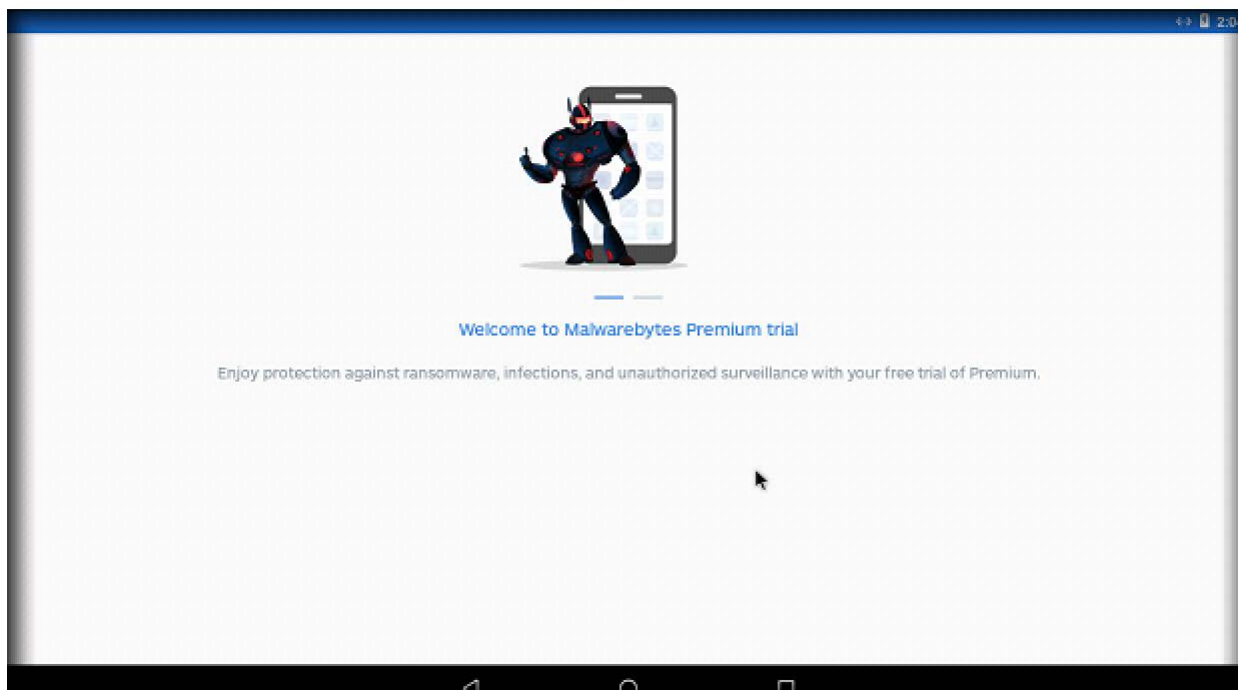
4. The application information is displayed, click **INSTALL** to start the installation of **Malwarebytes Security**. You can also read further by scrolling down.



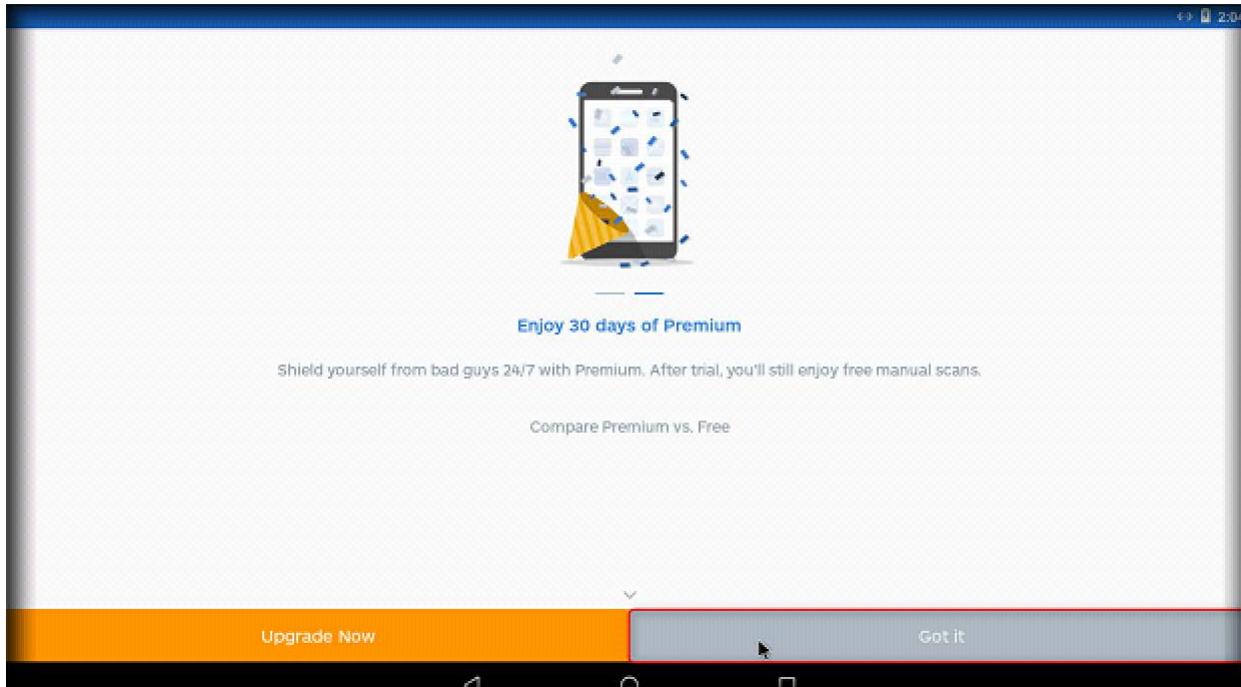
5. Once the application is installed, click **OPEN** to launch it.



6. Malwarebytes welcome screen appears, **swipe** to view the next screen.

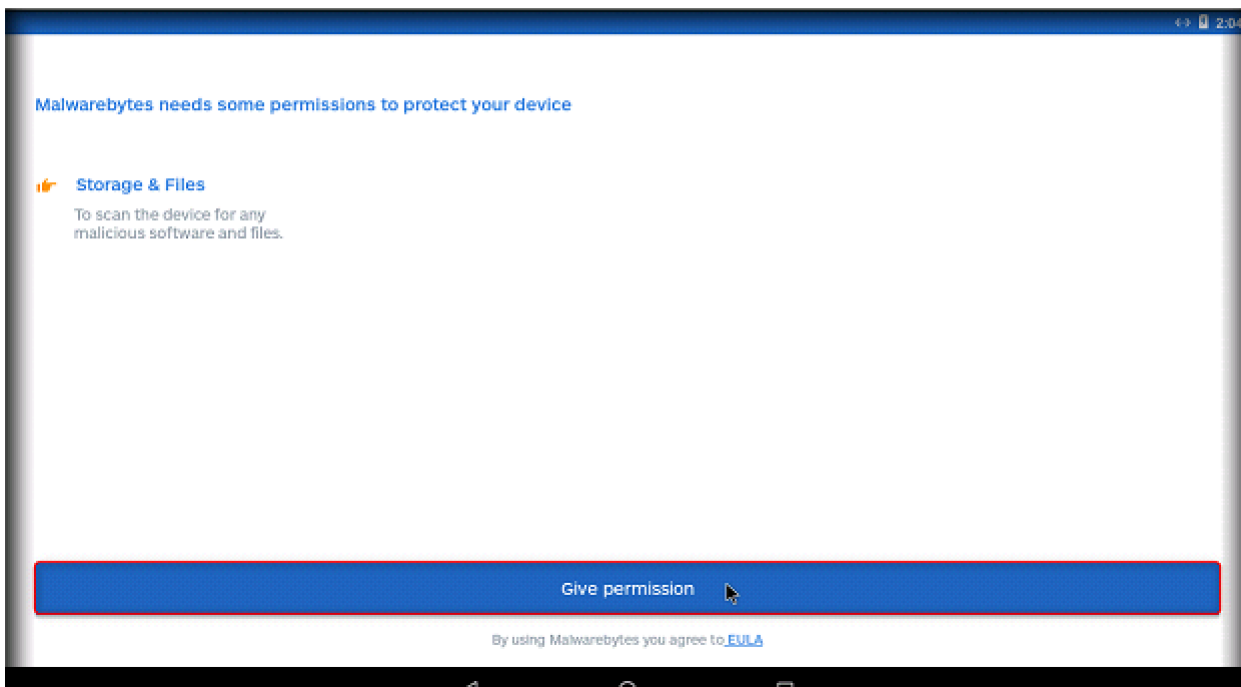


7. In the next screen click **Got It** to start Malwarebytes.

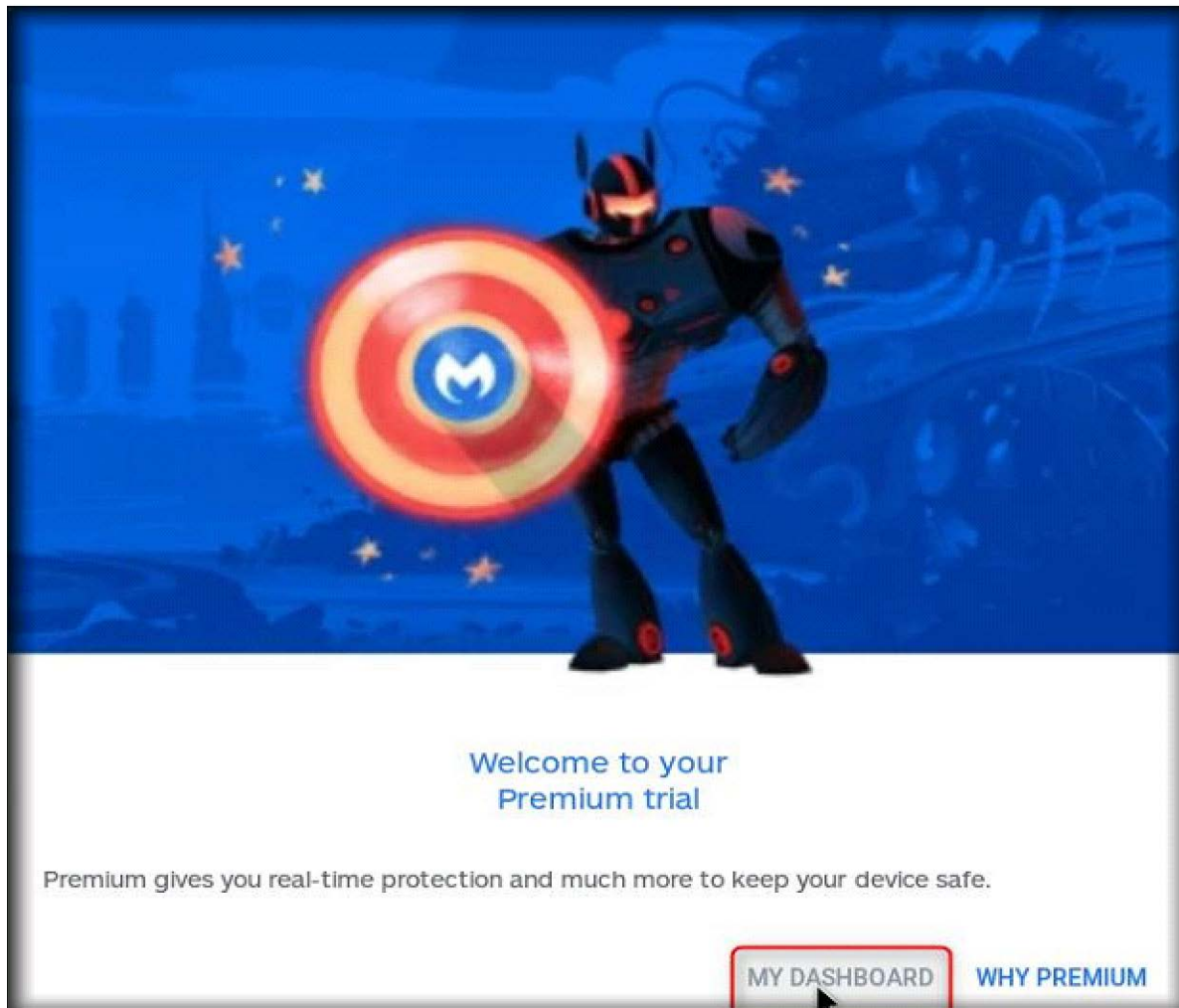


8. Malwarebytes will ask the user for permission to access the files. Click **Give permission**.

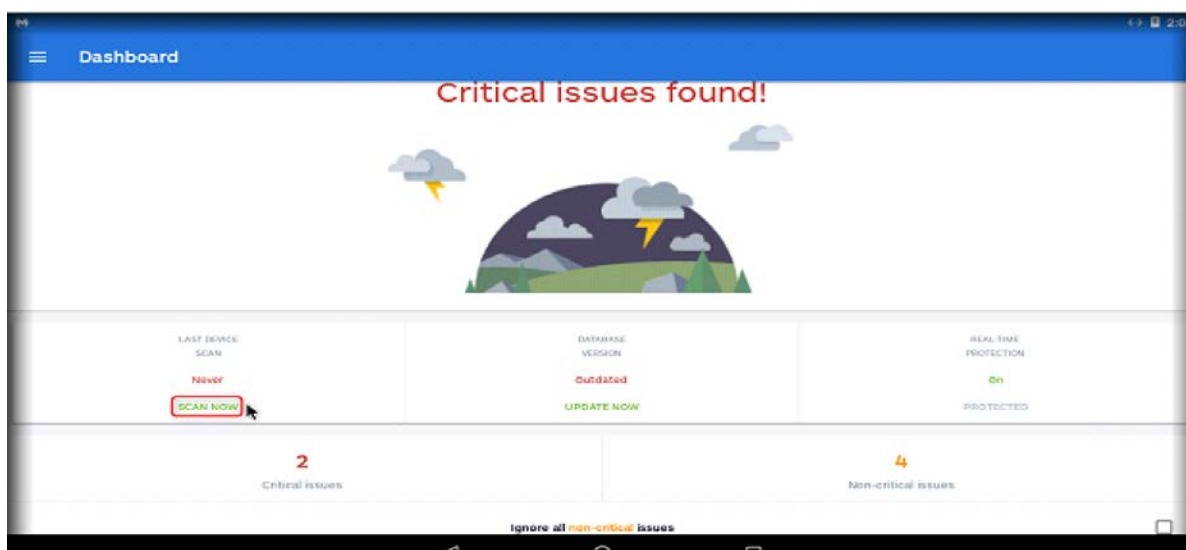
Note: If a system pop-up appears asking for permissions, click **ALLOW**.



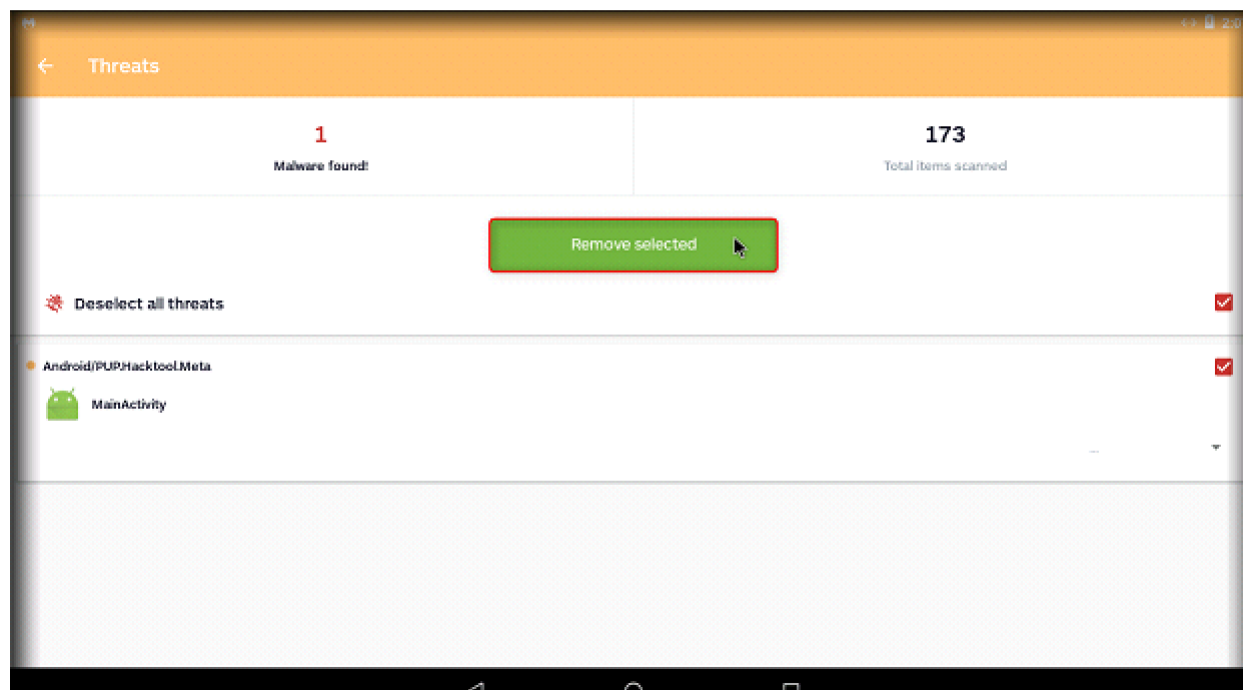
9. Welcome to your premium trial window appears, click **MY DASHBOARD**.



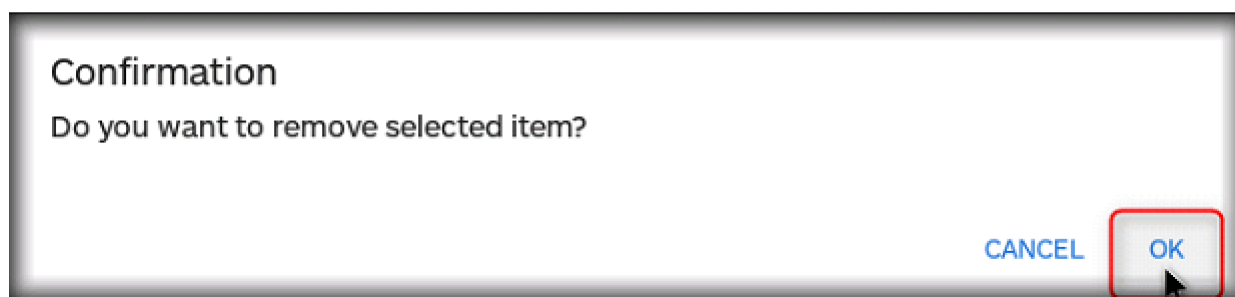
10. The Malwarebytes dashboard appears, under the Last Device scan heading click **SCAN NOW** to launch a malware scan on your Android machine.



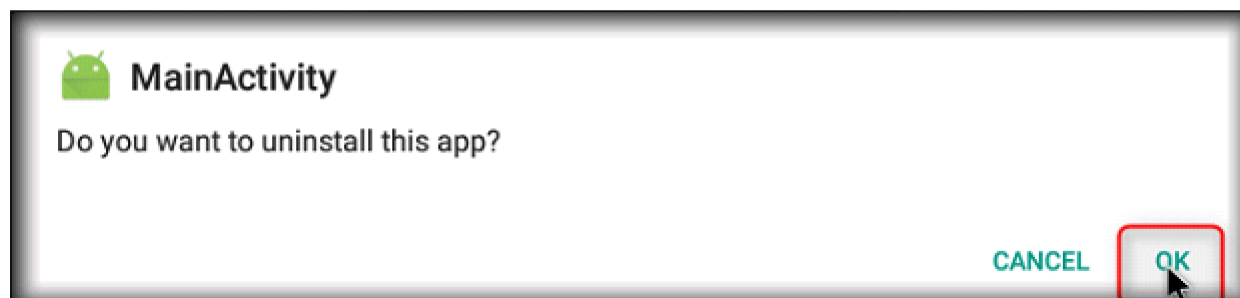
11. The program scans your device, and threat window opens. Here you will see all the malware (if any) found on your device. Click **Remove selected** button to remove the detected malware from your device.



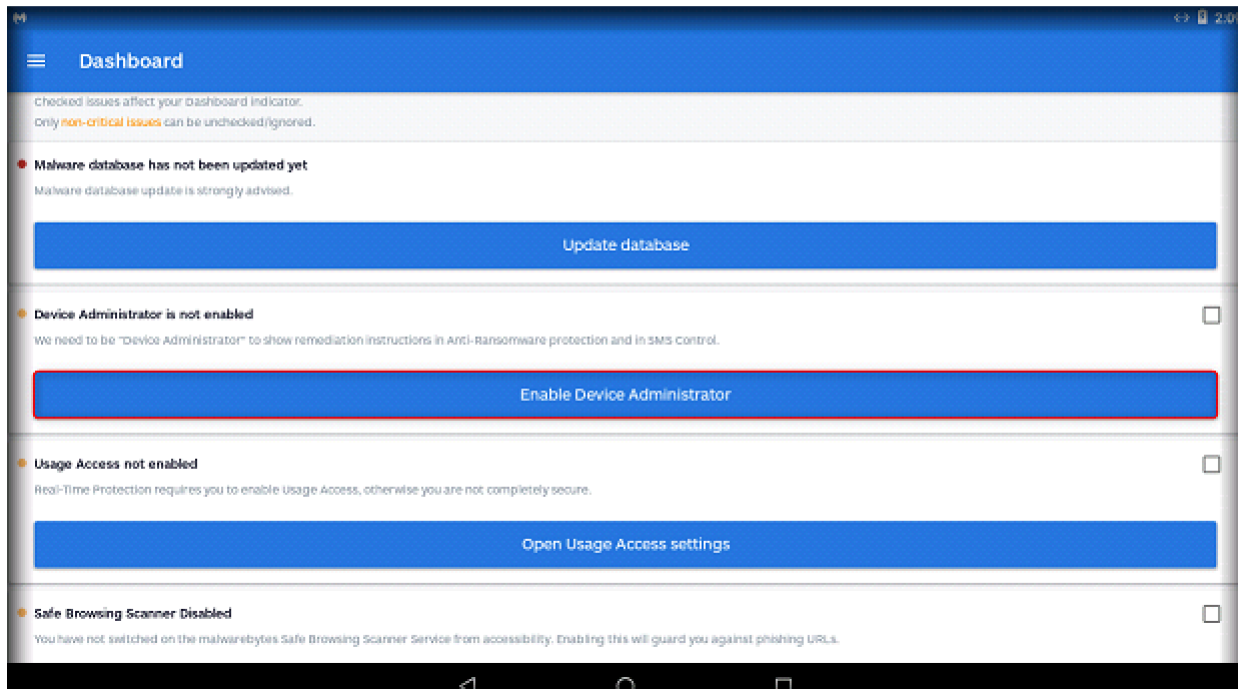
12. A confirmation window pops up, click **OK** to confirm the removal of malware.



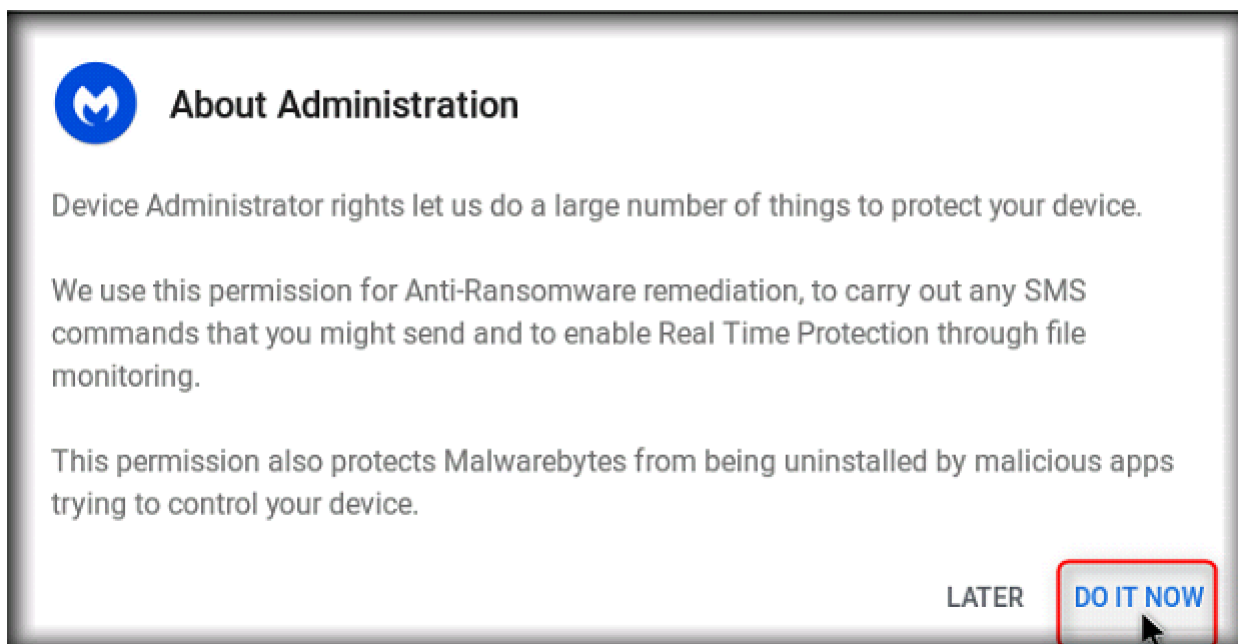
13. Main Activity window pops up, click **OK** to uninstall the malicious app from your device.



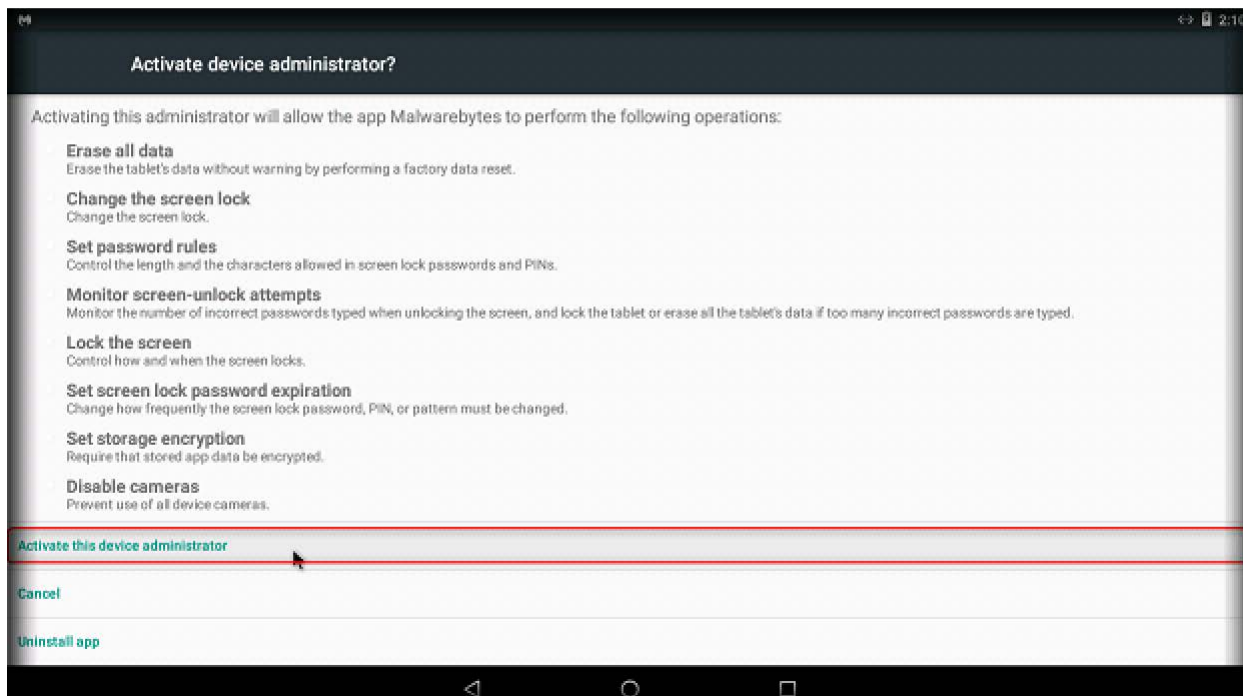
14. Now navigate back to your dashboard and scroll down to find Device Administrator is not enabled heading. Under this heading click the **Enable Device Administrator** button.



15. About Administration window pops up, click **DO IT NOW**.



16. You will be taken to Activate device administrator? Window, click **Activate this device administrator**. Now Malwarebytes has admin privileges and will keep a real-time check on your device for malware and other threats.



Lab Analysis

Analyze and document your results related to this lab exercise. Provide your opinion of your target's security posture and exposure.