

Lab 1: Introduction to Mobile Development

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MODE 4201



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Mobile Security

What is Mobile Security?

Mobile security is the protection of your mobile devices, such as phones, laptops, and other portable devices, from potential attacks from an outside source. With the usage of mobile devices skyrocketing over the past decade it has become increasingly important for mobile security to advance as fast as possible.



Why is Mobile Security Important?

As the usage of mobile devices increase so does the amount of sensitive data they collect. An average consumer's smart phone can contain a lot of important data collected from the user. This data can include passwords, bank pins, addresses, and other information that people want to keep private. This isn't including the potential of company phones and any of the intellectual property or other sensitive data that may be on the device. Mobile security allows for this information to be protected as best as possible and out of the hands of those who would use it for malicious purposes.

How Does Mobile Security Work?

With the many different types of attacks mobile devices can experience, there are many different layers when it comes to mobile security. The first is the devices operating system. The operating systems job is to make sure that any incoming application is not malicious and if it is handling as best as possible. This will usually involve isolating the app so that it cannot access a majority of the phone, restricting memory alteration, and overall monitoring execution threads for any suspicious behavior. The security software at the next level focus on firewalls, alerting the user if something is amiss, and making sure the user is triggering an action and not a virtual user. Mobile devices also constantly monitor resources such as battery and memory to determine if something is wrong and either try to solve the problem or alerting the user. As you can see mobile devices offer a wide variety of ways in which they protect user data from attacks, however it is not a perfect system.

Short Comings of Mobile Security

As mobile security keeps getting stronger and better, so do the tools that try to bypass it. Attackers will always try their best to find and improve ways to try to access the data on your mobile devices, such as through your web browser, through hardware vulnerabilities, or malware. Additionally, one of the biggest potential flaws with mobile security is the user. Even



if the phone is secured against many different attacks, if the user makes enough bad mistakes such as clicking on the wrong link, or giving out information that they shouldn't have, the phone will end up compromised. So even though mobile devices contain many ways to protect the user and their data, it is still important as to user to be safe and cautious while using your mobile device to keep your data protected.

Mobile Manufacturer - Samsung

- Manufacturer - Samsung
- Phone Model - Galaxy S20 FE
- Picture/Photo -



- Price - \$500
- Release Date - March 9th 2018
- Operating System - Android 8.0 (Oreo), upgradable to Android 10, One UI 2.5
- Chipset - Exynos 9810 (10 nm)
- Processor (CPU) - Octa-core (4x2.8 GHz Kryo 385 Gold & 4x1.7 GHz Kryo 385 Silver)
- Memory (RAM) - 4GB RAM
- Memory (Internal) - 128GB

- Display - Super AMOLED, HDR10, 1440 x 2960 pixels
- Camera (rear) - 12 MP, f/1.5-2.4, 26mm (wide), 1/2.55", 1.4µm, dual pixel PDAF, OIS
- Camera (Front) - 8 MP, f/1.7, 25mm (wide), 1/3.6", 1.22µm, AF
- GPS - Yes, with A-GPS, GLONASS, BDS, GALILEO
- Battery - Li-Ion 3000 mAh, non-removable (11.55 Wh)
- Battery (Talk time) - 22.5h
- Battery (standby) - 78h
- Network - GSM / CDMA / HSPA / EVDO / LTE
- Synchronization with desktop/laptop - Yes
- Voice enabled - Yes
- Browser - Samsung Internet
- Audio quality - Noise -93.4dB / Crosstalk -93.9dB
- Dimensions 147.7 x 68.7 x 8.5 mm (5.81 x 2.70 x 0.33 in)

Service Provider - Virgin

- Service Provider - Virgin
- Plan - Loyalty Sweet Pay 55 - 20GB
- Calls - Unlimited anytime minutes
- Data -20GB
- Messaging - ULT Worldwide Texts from Can
- Global Texting - Unlimited Incoming Text
- Voice mail - Voicemail 3
- Call features - Call Waiting, 3-Way Calling.
- Service credits (as free upgrades) - No
- Fees - \$55.00
- Usage policy (Terms and Conditions) - <https://www.virginmedia.com/legal/acceptable-use-policy>
- Coverage - 4G LTE
- Additional Data - \$13/100MB up to 800MB, \$0.15/MB thereafter
- Call Display - Yes

Works Cited

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