

Experiment No: 8.

Flashing, Unlocking and Formatting memory cards in Mobile phones.

Objective:

To gain practical experience in flashing, unlocking, and formatting memory cards in mobile phones, and understand the significance of these actions.

Requirement:

- Mobile phones (previously set up for the lab, not personal devices).
- Computer with necessary software and tools.
- Firmware files for flashing.
- Unlock codes or access to unlocking services.
- Memory cards with sample data.
- Backup storage devices (e.g., computer, external hard drive).
- Different SIM cards from various carriers (for unlocking).

Note -Flashing, unlocking, and formatting a memory card in a mobile phone are separate processes, and the steps for each task differ.

Flashing a phone

Flashing a phone refers to reprogramming to use with a new carrier.

Steps to flash a Phone -

Backup Your Data:

Before you start, ensure you have a complete backup of your phone's data, including contacts, photos, videos, and apps. This is crucial because the flashing process will erase all data on your phone.

Unlock Bootloader (if required):

Some phones require an unlocked bootloader to flash custom ROMs or firmware. If your phone's bootloader is locked and you want to unlock it, follow the specific instructions for your phone model. Note that unlocking the bootloader can void your warranty and may not be supported on all devices.

Download Firmware/Custom ROM:

Download the firmware or custom ROM you want to install on your phone. Ensure you download the correct file for your phone's make and model. You can often find these files on the manufacturer's official website or on specialized forums and websites.

Install Flashing Software:

You'll need specific software for flashing your phone. Common tools include Odin for Samsung phones, Mi Flash Tool for Xiaomi phones, or fast boot and ADB for many Android devices. Install the necessary software on your computer.

Put Your Phone in Download/Recovery Mode:

Depending on your phone, you may need to put it in download mode, recovery mode, or fast boot mode. This is typically done by pressing a combination of hardware buttons during the boot-up process. Consult your phone's documentation or search online for the correct method.

Connect Your Phone to Your Computer:

Use a USB cable to connect your phone to your computer. Make sure your computer recognizes your device. Ensure that USB debugging is enabled in the developer options on your phone if using ADB and fast boot.

Flash the Firmware/ROM:

Follow the instructions provided by the flashing software. Typically, you'll need to select the firmware or ROM file you downloaded earlier and start the flashing process. The software will guide you through the steps, and the process can take several minutes.

Wait for Completion:

Do not disconnect your phone during the flashing process. Wait for the software to complete the installation. Once it's finished, your phone will either automatically reboot or instruct you to reboot it.

Restore Data:

After flashing, your phone will be reset to its factory settings. You can now restore your data from the backup you created earlier.

Lock the Bootloader (if necessary):

If you unlocked the bootloader, you may want to relock it to maintain your phone's security and warranty.

Unlocking a Memory Card

Access Security Settings:

- Open the settings or options menu on your mobile device.
- Navigate to the security or privacy settings.

Locate the Memory Card:

- Find and select the option related to the memory card security or encryption.

Unlock the Memory Card:

- You will typically be prompted to enter a PIN, password, or use biometric authentication (such as fingerprint or facial recognition) to unlock the memory card.
- Follow the on-screen instructions to unlock it.

Formatting a Memory Card

Unlock the Memory Card:

- Ensure that the memory card is unlocked as described in the "Unlocking a Memory Card" section.

Access Storage Settings:

- Open the settings menu on your mobile device.
- Navigate to the storage or memory settings.

Locate the Memory Card:

- In the storage settings, find and select the memory card you want to format.

Format the Memory Card:

- Look for an option to format or erase the memory card.
- Confirm your decision to format the card.

Wait for the Process to Complete:

- Formatting may take some time, depending on the size of the memory card.

Memory Card Formatted:

- Once the process is complete, the memory card will be empty and ready for use.

Keep in mind that these steps are general guidelines, and specific options and locations may vary based on your phone's make and model. Additionally, formatting a memory card results in the loss of all data on the card, so make sure to back up any important files beforehand.