MCI Lab #1 Report

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Question # 1

HAL_UART_Transmit () is inside the while (1) loop so the message keeps sending again and again. The loop runs forever, so this lets you continuously monitor or debug data. If you put it outside the loop, it will send only once at startup, then stop, so you won't get ongoing updates.

Question # 2

The command screen /dev/ttyACM0 115200 opens a serial connection to the STM32 through the USB port at 115200 baud so you can view and interact with the data being sent by the microcontroller (like UART messages). If the baud rate doesn't match the value set in STM32CubeMX, the data will appear garbled, unreadable, or not show up at all because the PC and the STM32 are not "talking" at the same speed.

Pictures:

administrato@administrato-OptiPlex-5060: ~

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

administrato@administrato-OptiPlex-5060: $ cd download
bash: cd: download: No such file or directory
administrato@administrato-OptiPlex-5060: $ cd /home/administrator/downloads
bash: cd: /home/administrator/downloads: No such file or directory
administrato@administrato-OptiPlex-5060: $ cd /home/administrator
bash: cd: /home/administrator: No such file or directory
administrato@administrato-OptiPlex-5060: $ cd /home/administrato
administrato@administrato-OptiPlex-5060: $ sudo snap install code --classic
[sudo] password for administrato:
Download snap "code" (218) from channel "stable"                              25% 1.92MB/s 2m15s
```

administrato@administrato-OptiPlex-5060: ~

```
administrato@administrato-OptiPlex-5060: $ sudo apt install git -y
[sudo] password for administrato:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb
  git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git git-man liberror-perl
0 upgraded, 3 newly installed, 0 to remove and 420 not upgraded.
Need to get 4,147 kB of archives.
After this operation, 21.0 MB of additional disk space will be used.
Get:1 http://pk.archive.ubuntu.com/ubuntu jammy/main amd64 liberror-perl all 0.17029-1 [26.5 kB]
Get:2 http://pk.archive.ubuntu.com/ubuntu jammy-updates/main amd64 git-man all 1:2.34.1-1ubuntu1.15 [955 kB]
Get:3 http://pk.archive.ubuntu.com/ubuntu jammy-updates/main amd64 git amd64 1:2.34.1-1ubuntu1.15 [3,166 kB]
Fetched 4,147 kB in 3s (1,235 kB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 199942 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17029-1_all.deb ...
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a2.34.1-1ubuntu1.15_all.deb ...
Unpacking git-man (1:2.34.1-1ubuntu1.15) ...
Selecting previously unselected package git................................]
Preparing to unpack .../git_1%3a2.34.1-1ubuntu1.15_amd64.deb ...
Unpacking git (1:2.34.1-1ubuntu1.15) ...
Setting up liberror-perl (0.17029-1) ...
Setting up git-man (1:2.34.1-1ubuntu1.15) ...
Setting up git (1:2.34.1-1ubuntu1.15) ...
Processing triggers for man-db (2.10.2-1) ...
administrato@administrato-OptiPlex-5060: $
```