MCU Clock

Sources:

1) Crystal Oscillator – external component to connect (HSE – high speed external)
2) RC Oscillator – internal component (HSI – high speed internal)
3) PLL (Phase Locked Loop) – internal component

HSE:

- can be provided to the MCU via a crystal or external source
- On STM32-DISC board, HSE is 8MHz provided by onboard crystal

Peripheral Clock Configuration

- In modern MCUs, before using any peripheral, the peripheral clock must be enabled using peripheral clock registers
- By default, peripheral clock are disabled
- Peripheral won't respond to configuration value changes until the clock is enabled for that peripheral
- In STM32 microcontrollers, peripheral clock is managed through RCC(reset and clock control) registers (found in STM32 reference manual)

Note: to find the base address of a peripheral, go to memory map