GPIO - have a & memory space and address, that memory space is called registers.

GPIOA → Ox A002 000 ___ Ox A002 03FF

(End point)

(Start point)

All registers for GPIOA have been inside different address space but only one registers.

GPIOA

Registers

→ MODER   → LCKR

→ OTYPER   → AFRH

→ OSPEEDR

→ POPDR

→ IDR

→ ODR

→ BSRR

→ LCKR

→ AFRL

When we know the Base and offset we
will know where the starting address is

i) Base - Starting Address = offset
ii) Base + offset = Starting address.

→ Peripherals

UART
SPI
I2C
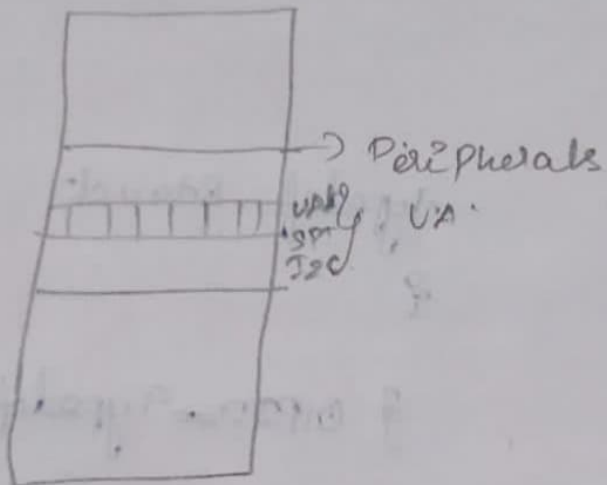
EX

Base = 20

offset = 20

Start address = 40

Start
from.

0 r00000000.