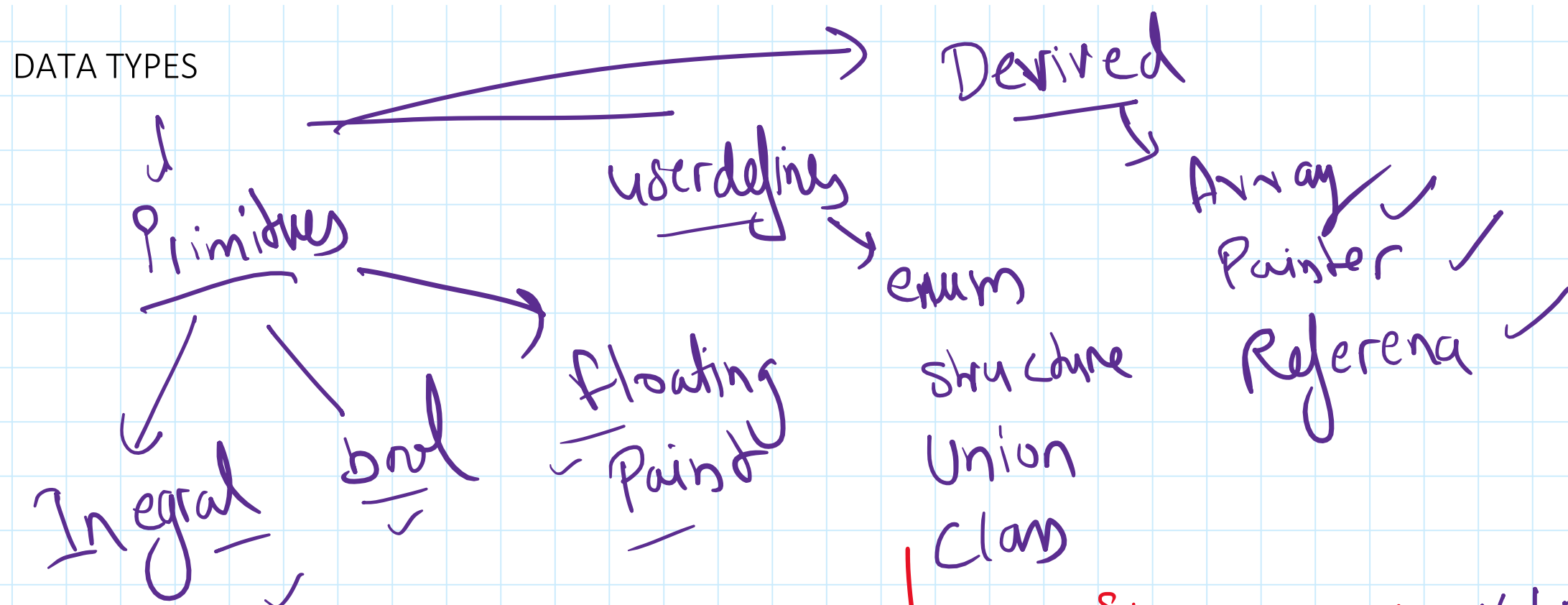


DATA TYPES



Integral $\left\{ \begin{array}{l} \text{int} \rightarrow \text{Size } (2 \text{ or } 4) \\ \text{char} \rightarrow 1 \text{ byte} \end{array} \right.$

bool $\left\{ \begin{array}{l} \text{True } (1) \\ \text{False } (0) \end{array} \right. \rightarrow \text{undefined}$

Floating point $\left\{ \begin{array}{l} \text{float} \\ \text{double} \end{array} \right.$

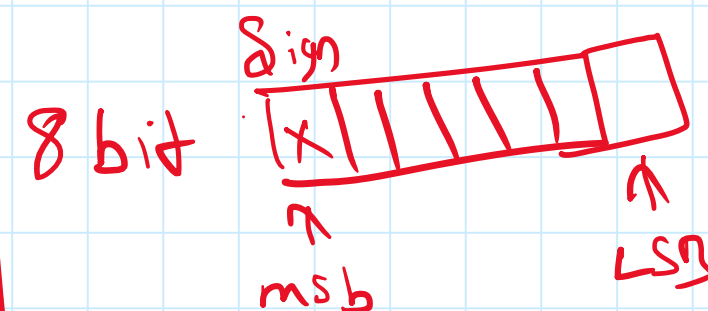
Char $\rightarrow -128 \text{ to } 127$

Char $\rightarrow 'A' \rightarrow 01001000$

ASCII $\rightarrow A \rightarrow 65 \quad a \rightarrow 97$
 $B \rightarrow 66 \quad b \rightarrow 98$

$2^8 \rightarrow 256$

Derived \rightarrow Array ✓
 Pointer ✓
 Reference ✓



$16 \text{ bit} = \text{int} \quad 16 \text{ bit} = 2 \text{ byte}$
 $32 \text{ bit} = 32$
 $64 \text{ bit} = 64$

Size Range \rightarrow int 16 bit \rightarrow -32768 to 32767
 $= 2^{16} \rightarrow$ signed \rightarrow -32768 to 32767
 \rightarrow unsigned $= 0$ to 65535

16 bit $\rightarrow 2^{16} = 65,536$

$\rightarrow 4 \text{ byte} \rightarrow 3.4 \times 10^{-38}$ to 3.4×10^{38}
 double $\rightarrow 8 \text{ byte} \rightarrow -1.7 \times 10^{308}$ to 1.7×10^{308}

Modifiers \rightarrow unsigned \rightarrow int char \rightarrow Range 0 to 255
 \rightarrow long \rightarrow long int $\rightarrow 4 \text{ byte} \rightarrow 8 \text{ byte}$
 long double $\rightarrow 8 \text{ byte} \rightarrow 16 \text{ byte}$