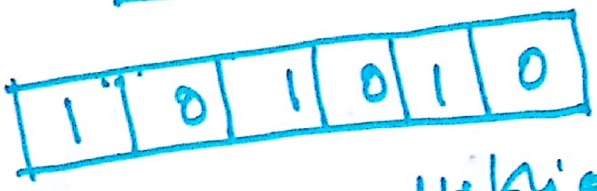
9.8.2018



21 X 2

Implement multiplication

$X * Y$

$* (a_0 \cdot 2^0 + a_1 \cdot 2^1 \ldots + a_n 2^n)$

Shift + ADDITION

Multiplication is costly.

Binary → ~~Octal~~ Hexadecimal / Octal.

$2^3 2^2 2^1 2^0$

1011.1011 1110. → BBE

B B E

→ ~~fraction~~ ternary $(x)_3$.

Hexadecimal → (0-9, A B, C D E F)

→ Octal

$(567.6)_8 \rightarrow (\quad)_{F6.}$

→ Two step process 1st Binary

Scanned by CamScanner

$(X)_2 \rightarrow (Y)_3$

$(\quad)_{10}$

$(1101110)_2 \rightarrow (\quad)_3$

$1\cdot2^6 + 1\cdot2^5 + 0\cdot2^4 + 1\cdot2^3 + 1\cdot2^2 + 1\cdot2^1 + 0\cdot2^0$

$= 3 \,|\, 110$

3	36	2
3	12	0
3	4	0
	1	1

$(\quad)_8 \rightarrow (\quad)_{16}$

$(\quad)_2$

$(\quad)_4 - (\quad)_{16}$

$\cancel{(\quad)_2}$

$(11002)_3$

$x\cdot3 + c = 110$

$(x\cdot3)$: 2.

$x > 0$

$\boxed{X2}$

$(\quad)_{16} \rightarrow (\quad)_{64}$

$(\quad)_4$

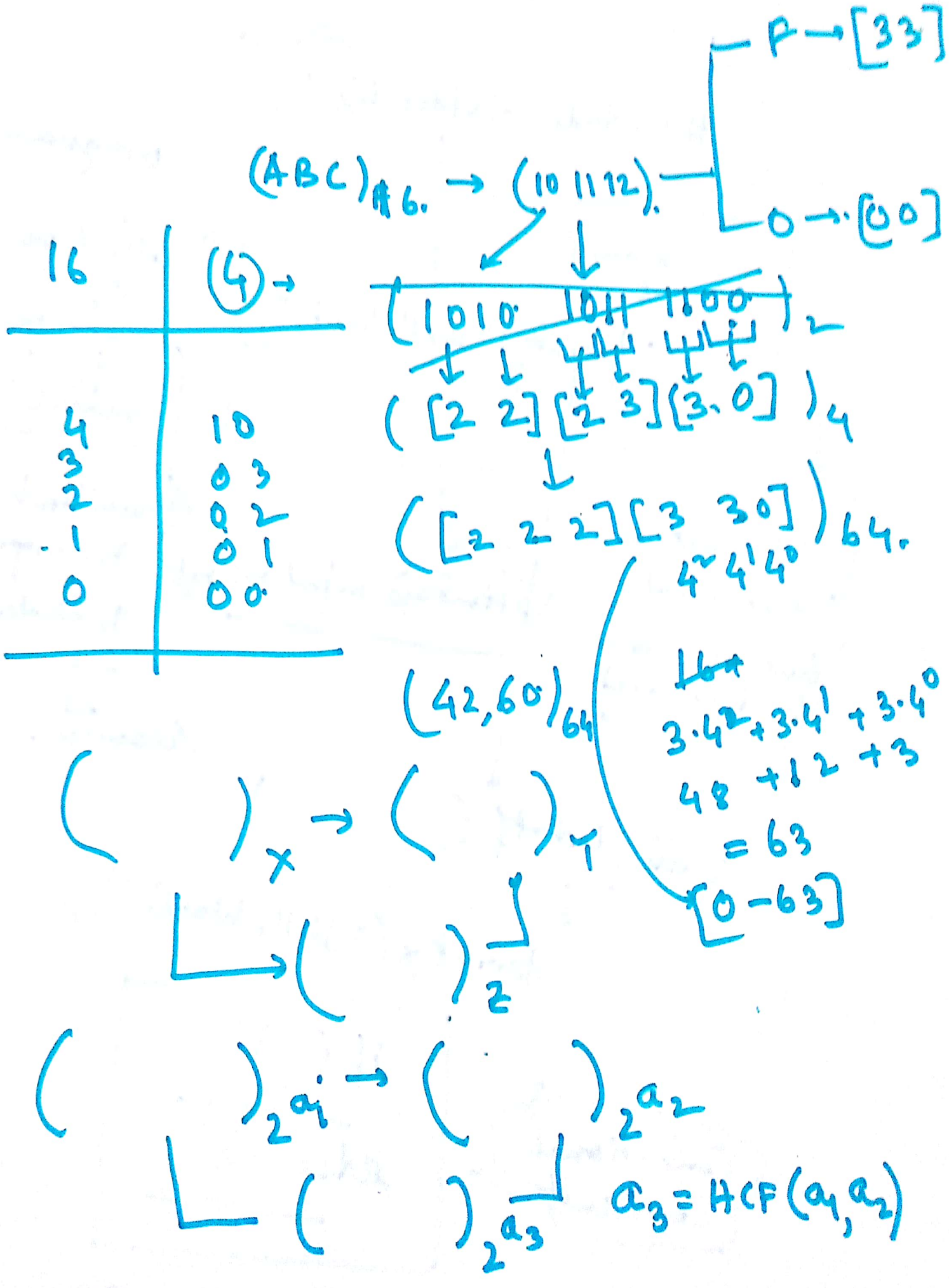
$3\cdot Y + c_1 = X$

$3\cdot Z + c_2 = Y$

$Y\,0\,2$

$Z\,0\,0\,2$

Scanned by CamScanner



$(ABC)_{16} \rightarrow (10\ 11\ 12)$

$F \rightarrow [3\ 3]$

$O \rightarrow [0\ 0]$

16	(4) →
4	10
3	03
2	02
1	01
0	00

$\cancel{(1010\ 1011\ 1100)_2}$

$([2\ 2]\ [2\ 3]\ [3\ 0])_4$

$([2\ 2\ 2]\ [3\ 3\ 0])_{64}$

$4^2\ 4^1\ 4^0$

$\cancel{16}$

$3 \cdot 4^2 + 3 \cdot 4^1 + 3 \cdot 4^0$

$48 + 12 + 3$

$= 63$

$[0 - 63]$

$(42, 60)_{64}$

$(\quad)_X \rightarrow (\quad)_Y$

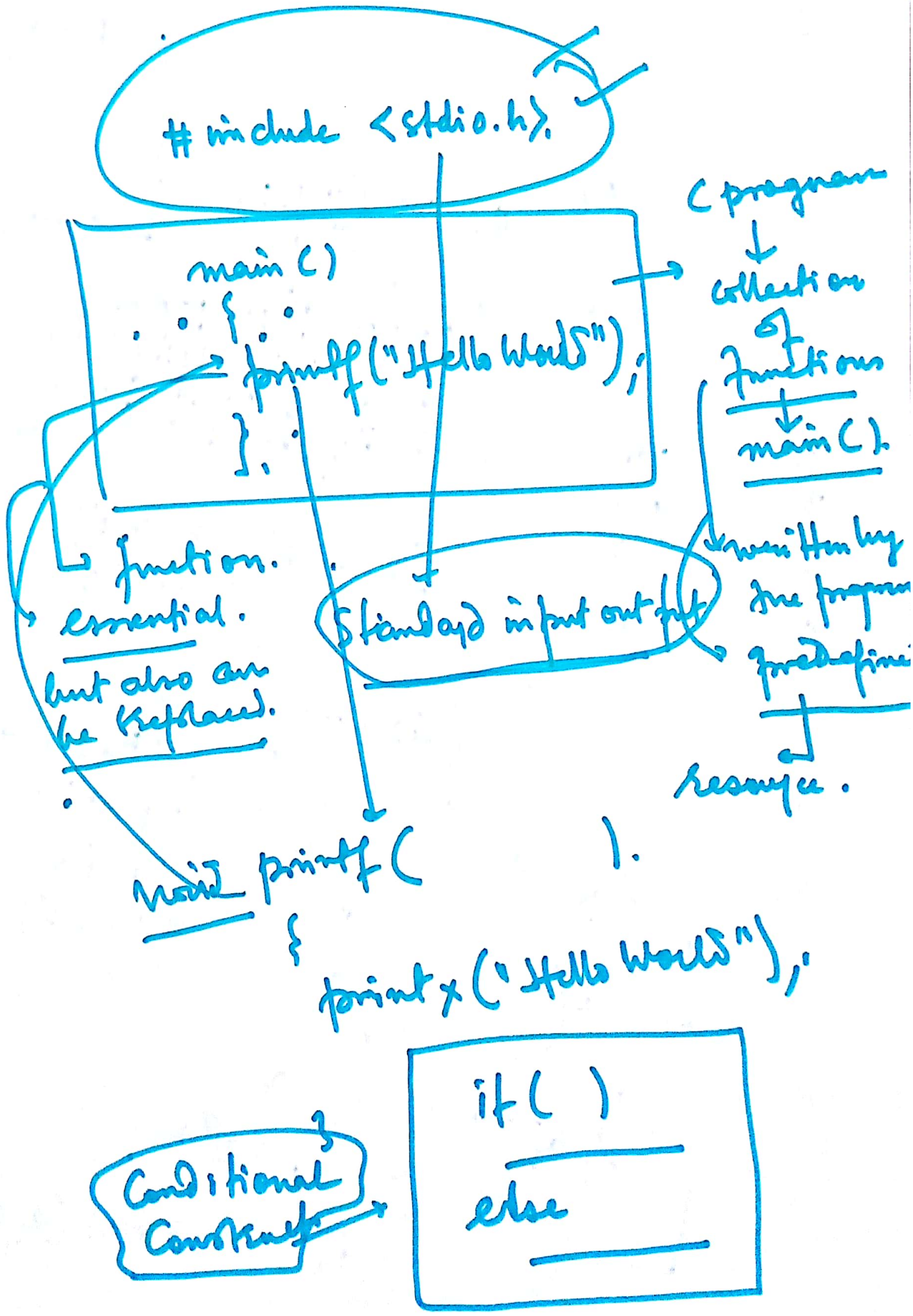
$\rightarrow (\quad)_Z$

$(\quad)_{2^{a_1}} \rightarrow (\quad)_{2^{a_2}}$

$(\quad)_{2^{a_3}}$

$a_3 = HCF(a_1, a_2)$

Scanned by CamScanner



Scanned by CamScanner

x = 5, Y = 3. →
x = 5, Y = 7

. . .

→ Largest number is 5
Largest number is 3.

Largest number is 7

If (x > Y) printf ("Largest %d", X);
If (Y > x+5) printf ("Largest %d", Y);

If (x > Y) printf (. . .)
else printf ( )

Greater.

Scanned by CamScanner