

13/10/23

Simple strategies for developing Algorithm.

Day 23

- i) Top-down approach
- ii) Bottom-up approach

Iteration :

→ Counter Controlled

↳ Entry

→ Sentinel Controlled

↳ Exit

⇒ Sentinel Controlled loop

E.g: Sum of digits

WHILE ($n > 0$) : # $n \Rightarrow$ Sentinel variable / state

$y = n \% 10$

$s = s + y$

$n = n / 10$

END WHILE

ps1

Write a Pseudo code to print the sum of individual digits of a given number.

```

START
INPUT n
ASSIGN s to zero
WHILE n > 0 :
    COMPUTE  $Y = n \text{ MOD } 10$ 
    COMPUTE  $S = S + Y$ 
    COMPUTE  $N = N / 10$ 
END WHILE
PRINT S
STOP

```

ps2 Write a Pseudo code to ~~print~~ check whether the given number is palindrome or not.

```

START
INPUT n
ASSIGN s to zero, m to n
WHILE n > 0 :
    COMPUTE  $Y = n \text{ MOD } 10$ 
    COMPUTE  $S = S * 10 + Y$ 
    COMPUTE  $N = n / 10$ 
END WHILE
IF  $S = m$  :
    PRINT "Palindrome"
ELSE :
    PRINT "Not Palindrome"
END IF
STOP

```