SECJ 1013

PROGRAMMING TECHNIQUE 1

SEM 1, 2024/2025

LAB EXERCISE 1

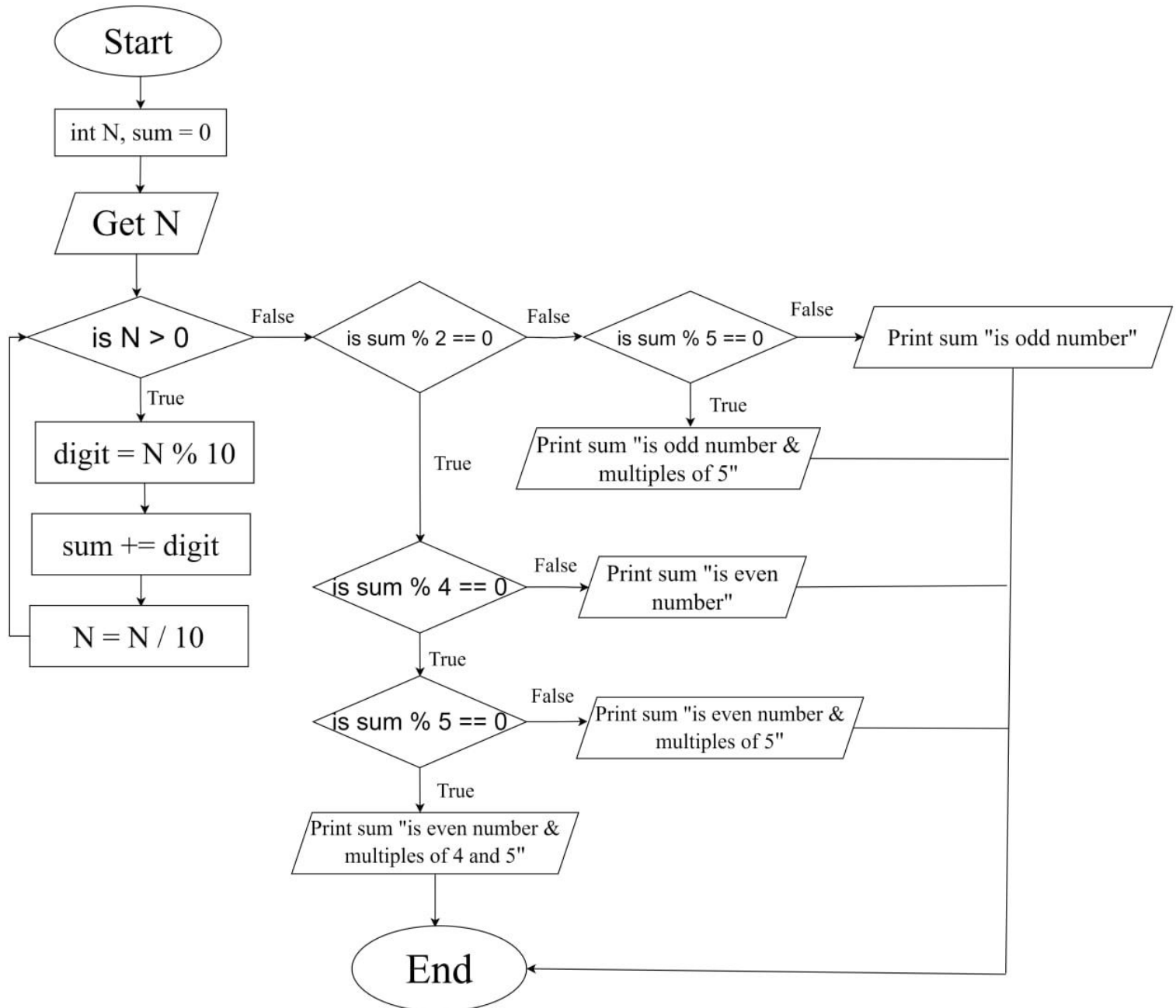Section: 03

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Date: 18.10.2024

Flowchart

```
              ┌──────────┐
              │  Start   │
              └────┬─────┘
                   │
         ┌─────────▼──────────┐
         │  int N, sum = 0    │
         └─────────┬──────────┘
                   │
              ┌────▼─────┐
             / Get N    /
            └────┬──────┘
                 │
```

- Start
- int N, sum = 0
- Get N

- is N > 0
  - False → is sum % 2 == 0
  - True → digit = N % 10 → sum += digit → N = N / 10 (loop back to is N > 0)

- is sum % 2 == 0
  - False → is sum % 5 == 0
  - True → is sum % 4 == 0

- is sum % 5 == 0
  - False → Print sum "is odd number"
  - True → Print sum "is odd number & multiples of 5"

- is sum % 4 == 0
  - False → Print sum "is even number"
  - True → is sum % 5 == 0

- is sum % 5 == 0
  - False → Print sum "is even number & multiples of 5"
  - True → Print sum "is even number & multiples of 4 and 5"

- Print sum "is even number & multiples of 4 and 5" → End

Pseudocode

Start

Read N

Initialize sum = 0

WHILE N > 0

DO digit = N % 10

sum += digit

N = N / 10

End While

IF sum % 2 = 0

       IF   (sum % 4 = 0 and sum % 5 = 0)

            Print sum "is even number & multiples of 4 and 5"

       ELSE IF (sum % 4 = 0)

            Print sum "is even number & multiples of 4"

       ELSE IF (sum % 5 = 0)

            Print sum "is even number & multiples of 5"

       ELSE

            Print sum "is even number"

ELSE

       IF (sum % 5 = 0)

        Print sum "is odd number & multiples of 5"

       ELSE

        Print sum "is odd number"

END