LAB EXERCISE 1 (SECJ1013)
PROGRAMMING TECHNIQUE 1
SEM 1, 2024/2025

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" Success runs on algorithms."

ANSWER

PSEUDOCODE:

1.   **START**

2.   SET sum = 0

3.   READ integer

4.   WHILE integer > 0

         4.1   digit = integer % 10

         4.2   sum = sum + digit

         4.3   integer = (integer − digit) / 10

5.   END_WHILE

6.   IF sum % 2 == 0

         6.1   sum is even number

7.   ELSE

         7.1   sum is odd number

8.   END_IF

9.   IF sum % 4 == 0 && sum % 5 == 0

         9.1   sum is multiples of 4 and 5

10.   ELSE IF sum % 4 == 0

         10.1   sum is multiples of 4

11.   ELSE IF sum % 5 == 0

         11.1   sum is multiples of 5

12.   END_IF

13.   **STOP**

FLOW CHART:

```
                            ┌─────────────┐
                           (   START      )
                            └──────┬──────┘
                                   │
                            ┌──────▼──────┐
                            │ SET sum = 0 │
                            └──────┬──────┘
                                   │
                           ╱───────▼───────╲
                          (  READ integer   )
                           ╲───────┬───────╱
                                   │
```

- START
- SET sum = 0
- READ integer

integer > 0? — Yes →
digit = integer % 10
sum = sum + digit
integer = (integer - digit) / 10

No ↓

sum % 2 == 0? — No → sum is odd number

Yes ↓

sum is even number

sum % 4 == 0 && sum % 5 == 0? — Yes → sum is multiples of 4 and 5

No ↓

sum % 4 == 0? — Yes → sum is multiples of 4

No ↓

sum % 5 == 0? — Yes → sum is multiples of 5

No ↓

STOP