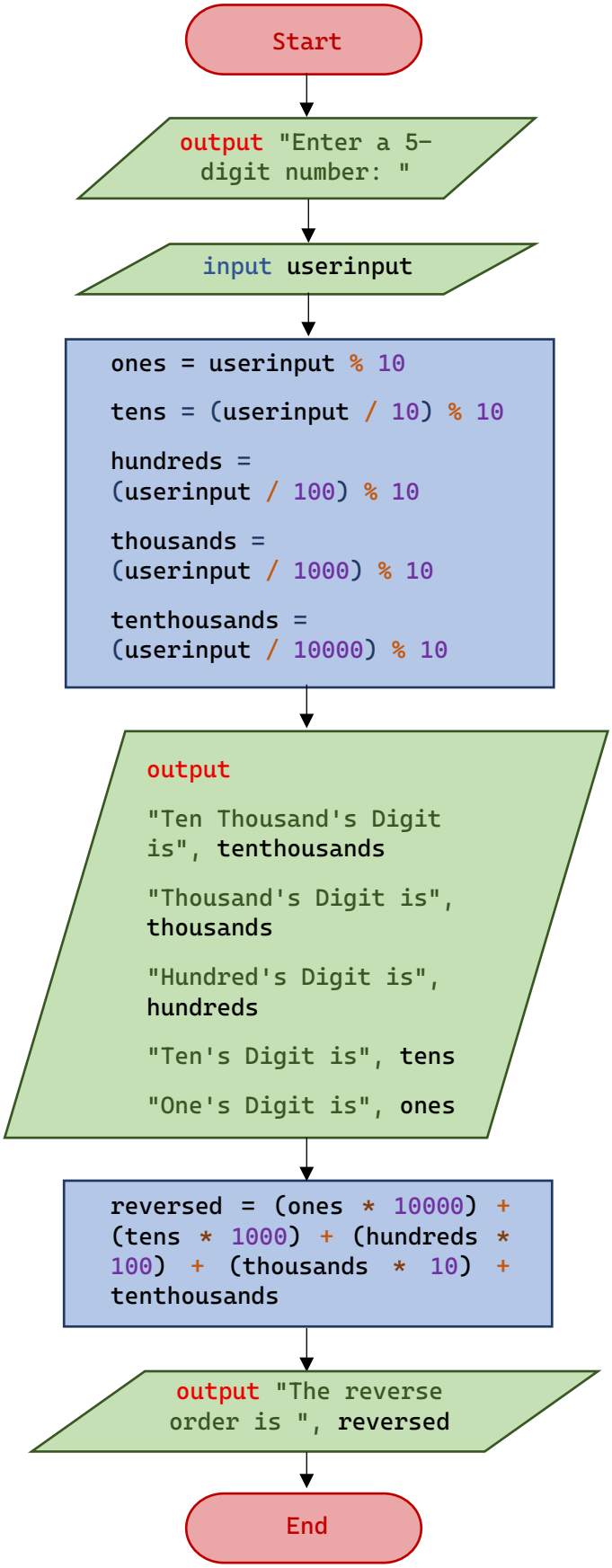
DE GUZMAN, EIVMOR (INGENTE) 2025101703
CSS121P BSCS AM2 T12526
Exercise 1

Problem 1 - Sequential



Variables Used:

userinput, ones, tens, hundreds, thousands, tenthousands, reversed ARE NUMERIC

Begin:

```
    DISPLAY "Enter a 5-digit number:"

    ACCEPT userinput

    ones = userinput % 10
// Remainder when using modulo 10 gives us the last digit of an integer

    tens = (userinput / 10) % 10
// Integer division by 10^n removes n digits from the right, then use modulo 10

    hundreds = (userinput / 100) % 10

    thousands = (userinput / 1000) % 10

    tenthousands = (userinput / 10000) % 10

    // Display each extracted digit

    DISPLAY "Ten Thousand's Digit is", tenthousands

    DISPLAY "Thousand's Digit is", thousands

    DISPLAY "Hundred's Digit is", hundreds

    DISPLAY "Ten's Digit is", tens

    DISPLAY "One's Digit is", ones

    // Formula for reversed number

    reversed = (ones * 10000) + (tens * 1000) + (hundreds * 100) + (thousands * 10) + tenthousands

    DISPLAY "The reverse order is ", reversed
```

End

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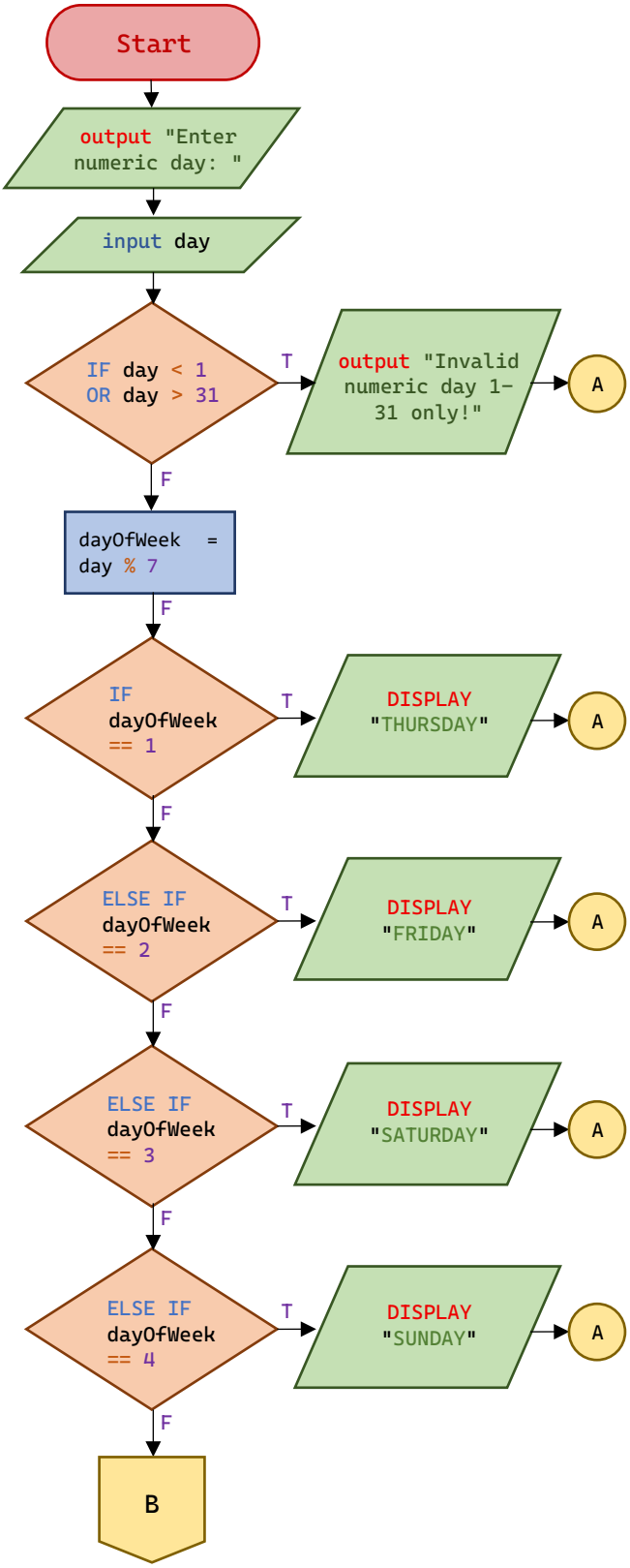
Exercise 1

Problem 2 – Conditional



Variables Used:

day, dayOfWeek ARE NUMERIC

Begin:

```
    DISPLAY "Enter numeric day: "
    ACCEPT day
    // Check if input is within range
    IF day < 1 OR day > 31 THEN
        DISPLAY "Invalid numeric day 1-31 only!"
    ELSE
// Make Dec 1 = 1 (Thursday), then mod 7 for weekly cycle
        dayOfWeek = day % 7
        IF dayOfWeek == 1 THEN
// December 1st falls on (Thursday)
            DISPLAY "THURSDAY"
        ELSE IF dayOfWeek == 2 THEN
            DISPLAY "FRIDAY"
        ELSE IF dayOfWeek == 3 THEN
            DISPLAY "SATURDAY"
        ELSE IF dayOfWeek == 4 THEN
            DISPLAY "SUNDAY"
        ELSE IF dayOfWeek == 5 THEN
            DISPLAY "MONDAY"
        ELSE IF dayOfWeek == 6 THEN
            DISPLAY "TUESDAY"
        ELSE
            DISPLAY "WEDNESDAY"
        ENDIF
    ENDIF
```

End

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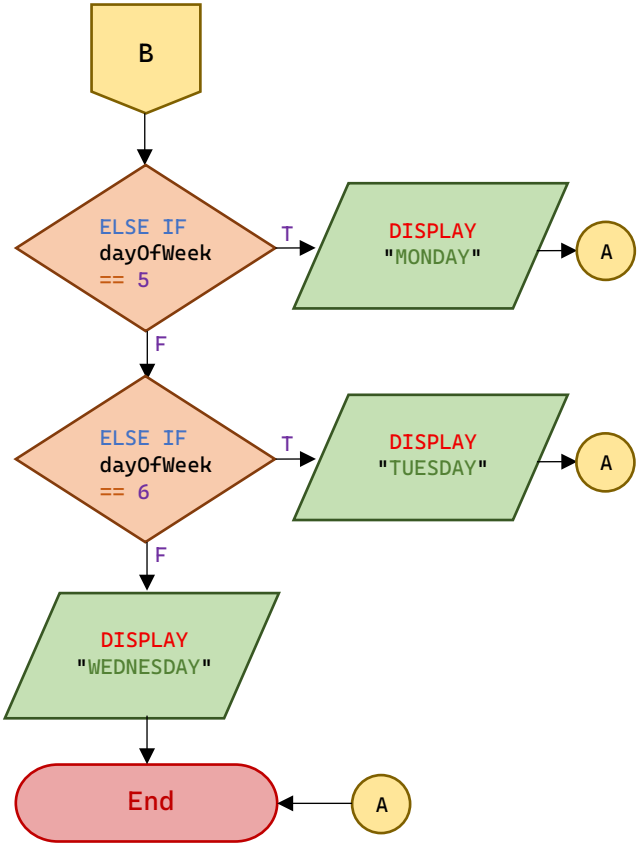
Exercise 1

Problem 2 – Conditional



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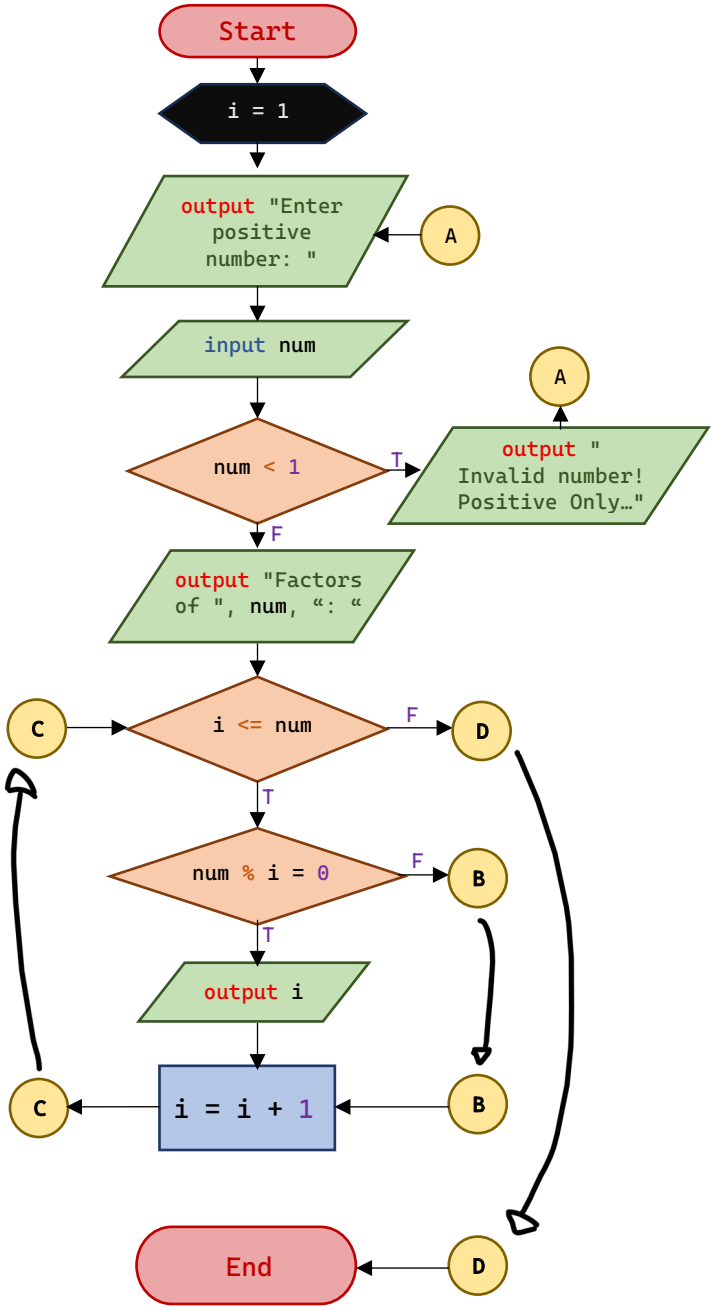
Exercise 1

Problem 3 – Iterative



Variables Used:

num, i ARE NUMERIC

Begin:

```
    DISPLAY "Enter a positive number: "
    ACCEPT num

    WHILE num < 1 DO
    BEGIN
        DISPLAY "Invalid number! Positive Only…"
        DISPLAY "Enter a positive number: "
        ACCEPT num
    END

    DISPLAY "Factors of ", num, ": "
    i = 1
    WHILE i <= num DO
    BEGIN
        IF num % i = 0 THEN
            DISPLAY i
        END IF
        i = i + 1
    END
End
```