GROOVY DATE RELATED PROBLEMS

Format Date to String

- **Problem**: Convert the date "2024-10-01" into the string format "01-Oct-2024".

- **Expected Output**: "01-Oct-2024"

Subtract Weeks from a Date

- **Problem**: Subtract 5 weeks from the date "2024-12-01" and return the result.

- **Expected Output**: "2024-10-27"

First Monday of the Month

- **Problem**: Find the date of the first Monday of the month for the given date "2024-07-15".

- **Expected Output**: "2024-07-01"

Find Age

- **Problem**: Calculate the age of a person born on "1995-10-12" as of today's date.

- **Expected Output**: If today is 2024-09-17, the output should be 28 years.

Check if Date is in the Past

- **Problem**: Given the date "2023-05-15", check if it is before today's date.

- **Expected Output**: true if today's date is 2024-09-17.

Next

1. Find the Next Business Day

- **Problem**: Given a date "2024-09-27" (a Friday), return the next business day (skipping weekends and public holidays). Assume "2024-09-30" is a public holiday.

- **Expected Output**: "2024-10-01"

2. Calculate Age in Years, Months, and Days

- **Problem**: Write a Groovy function that calculates the exact age (in years, months, and days) of a person born on "1990-05-15" as of "2024-09-17".

- **Expected Output**: 34 years, 4 months, 2 days

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3. Find All Fridays of the Year

- **Problem**: Given the year 2024, list all the Fridays of that year in the yyyy-MM-dd format.

- **Expected Output**:

  2024-01-05

  2024-01-12

  2024-01-19

  ...

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4. Find the Date of Easter for a Given Year

- **Problem**: Write a Groovy function to calculate the date of Easter Sunday for any given year (e.g., for 2025).

- **Expected Output**: For 2025, the output should be "2025-04-20".

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5. Validate Date Range and Split into Intervals

- **Problem**: Write a Groovy function that validates a given date range, "2024-01-15" to "2024-12-30", and splits it into intervals of 60 days each.

- **Expected Output**:

  [2024-01-15 to 2024-03-15]

  [2024-03-16 to 2024-05-15]

  [2024-05-16 to 2024-07-15]

  [2024-07-16 to 2024-09-14]

  [2024-09-15 to 2024-11-13]

  [2024-11-14 to 2024-12-30]

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6. Find Overlapping Date Ranges

- **Problem**: Given two date ranges, "2024-05-10" to "2024-07-15" and "2024-06-01" to "2024-08-01", find the overlapping date range.

- **Expected Output**: "2024-06-01" to "2024-07-15"

GROOVY DATE RELATED PROBLEMS

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7. Generate a List of Dates Excluding Weekends

- **Problem**: Write a Groovy function that generates a list of all dates between "2024-01-01" and "2024-01-31", excluding weekends.

- **Expected Output**:

  2024-01-01

  2024-01-02

  2024-01-03

  ...

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8. Calculate Working Days Between Two Dates

- **Problem**: Given the start date "2024-09-01" and end date "2024-09-30", calculate the total number of working days (excluding weekends and public holidays). Assume "2024-09-15" is a public holiday.

- **Expected Output**: 20 working days

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9. Find the Nth Day of the Year

- **Problem**: Given a date "2024-10-05", find the day number of the year (i.e., how many days have passed since January 1st, 2024).

- **Expected Output**: 279th day

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10. Find Dates Between Two Dates that Fall on Specific Days

- **Problem**: Given the date range "2024-01-01" to "2024-12-31", find all the dates that fall on a Tuesday within that range.

- **Expected Output**:

  2024-01-02

  2024-01-09

  2024-01-16

  ...