EXPERIMENT 6

6.1.1 Incremented Date

ALGORITHM

Step 1: Start the program.

Step 2: Input day (DD).

Step 3: Input month (MM).

Step 4: Input year (YYYY).

Step 5: Check if year ≤ 0.
If yes, print "Invalid Date" and go to Step 20.

Step 6: Check if month < 1 or month > 12.
If yes, print "Invalid Date" and go to Step 20.

Step 7: Determine if the year is a leap year using the condition:
If (year % 400 == 0) OR (year % 4 == 0 AND year % 100 ≠ 0),
then leap_year = True,
else leap_year = False.

Step 8: Set maximum days in the month:
If month is 1, 3, 5, 7, 8, 10, or 12 → max_days = 31.

Step 9: Else if month is 4, 6, 9, or 11 → max_days = 30.

Step 10: Else if month is 2:
If leap_year is True → max_days = 29.
Else → max_days = 28.

Step 11: Check if day < 1 or day > max_days.
If yes, print "Invalid Date" and go to Step 20.

Step 12: If day < max_days, then
new_day = day + 1
new_month = month
new_year = year

Step 13: Else if day == max_days and month ≠ 12, then
new_day = 1
new_month = month + 1
new_year = year

Step 14: Else if day == 31 and month == 12, then
new_day = 1
new_month = 1
new_year = year + 1

Step 15: Display the incremented date in the format
DD-MM-YYYY

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Step 16: End the program.

PYTHON CODE

```
day = int(input())
month = int(input())
year = int(input())



def is_leap_year(year):
    if (year % 400 == 0) or (year % 4 == 0 and year % 100 != 0):
        return True
    return False



if year <= 0:
    print("Invalid Date")



elif month < 1 or month > 12:
    print("Invalid Date")


else:


    if month in [1, 3, 5, 7, 8, 10, 12]:
        max_days = 31
    elif month in [4, 6, 9, 11]:
        max_days = 30
    elif month == 2:
        if is_leap_year(year):
            max_days = 29
        else:
```

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```
        max_days = 28



if day < 1 or day > max_days:
    print("Invalid Date")
else:

    day += 1

    if day > max_days:
        day = 1
        month += 1

        if month > 12:
            month = 1
            year += 1



    print(f"{day:02d}-{month:02d}-{year}")
```

FLOWCHART

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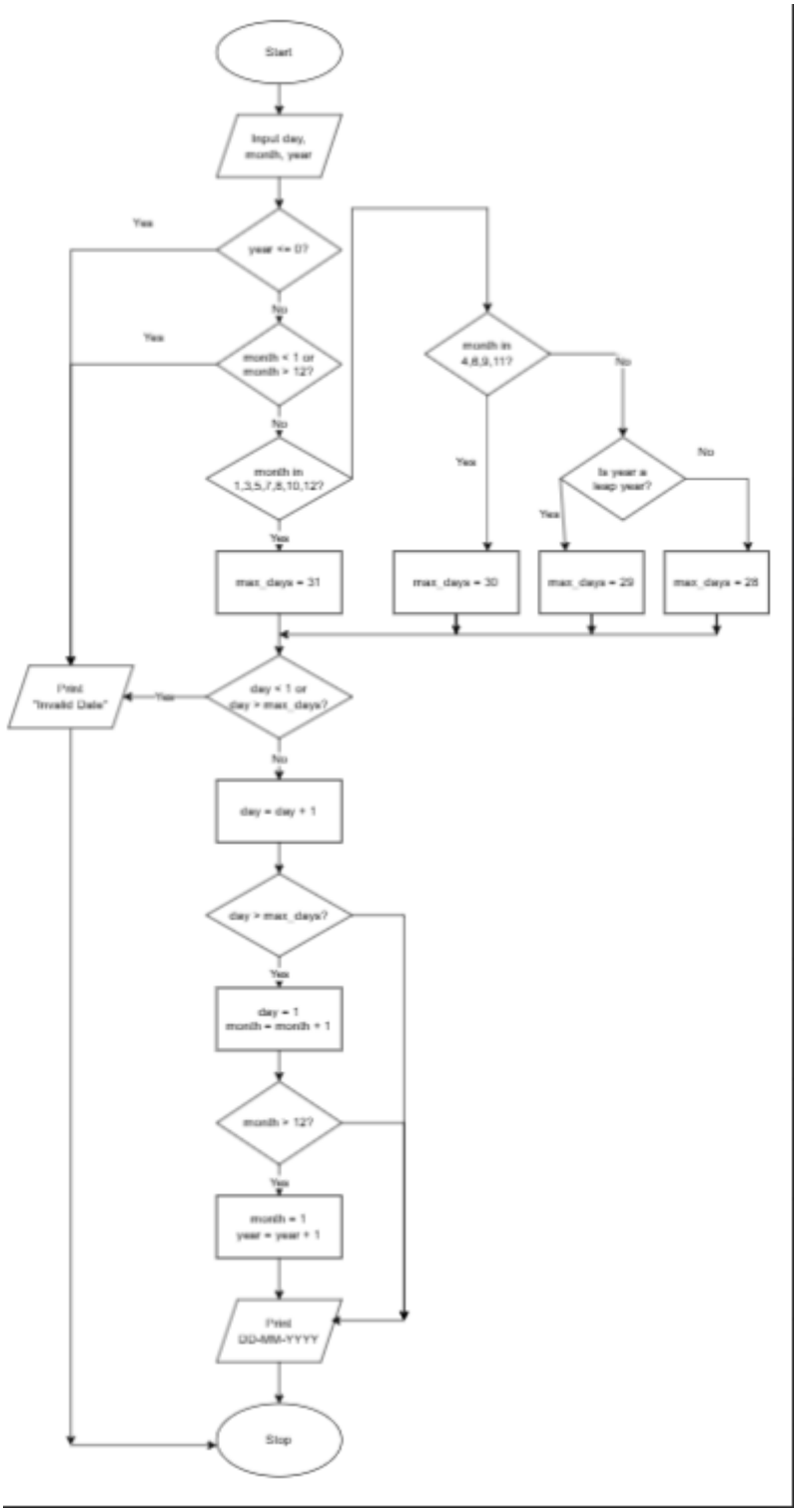

EXPERIMENT 6

EXCECUTION