

EXPERIEMNT - 5

5.1.1 Leap Year Checker

ALGORITHM

Step 1: Start the program.

Step 2: Input the year from the user.

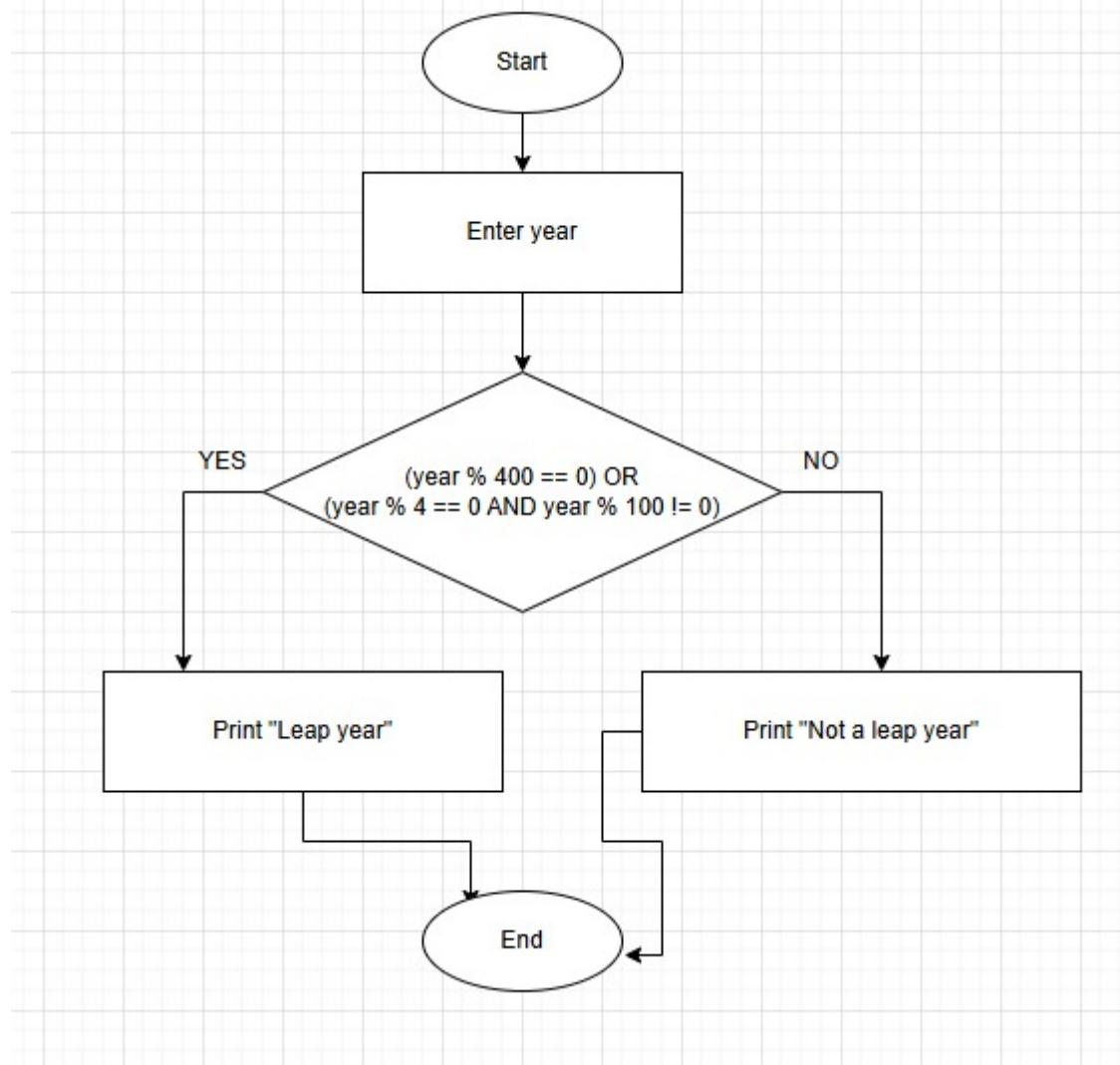
Step 3: Check if $(\text{year} \% 400 == 0)$ OR $(\text{year} \% 4 == 0 \text{ AND } \text{year} \% 100 != 0)$.

Step 4: If the condition is true, print "Leap year".

Step 5: Otherwise, print "Not a leap year".

Step 6: End the program.

FLOWCHART



PYTHON CODE

EXPERIEMNT - 5

```
year = int(input())
if (year % 400 == 0) or (year % 4 == 0 and year % 100 != 0):
    print("Leap year")
else:
    print("Not a leap year")
```

EXCECUTION

The screenshot shows the CodeTantra IDE interface. The user is working on a file named 'leapYear.py'. The code checks if a given year is a leap year based on the rules: divisible by 400, or divisible by 4 but not by 100. The code is as follows:

```
1 year=int(input())
2 if (year % 400 == 0) or (year % 4 == 0 and year % 100!= 0):
3     print("Leap year")
4 else:
5     print("Not a leap year")
```

The IDE displays performance metrics: Average time 0.005 s, Maximum time 0.006 s, and 2 out of 2 test cases passed. The test cases are shown below:

Test Case	Average Time	Expected Output	Actual Output
Test case 1	6 ms	2024	2024
Test case 2	6 ms	Leap year	Leap year

At the bottom, there are buttons for Terminal, Test cases, Prev, Reset, Submit, and Next >.