PROJECT NO.17

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QUESTION ------->>>

Your task to create a functionality in which when user will input a range of two dates. Then your module will find and print all years in the range of given dates those are leap years separately and rest of the years those are non-leap separately.

For example: Input date range in the format: dd/mm/yy (12/01/200) to (13/12/2025)

Leaps years are: 2000, 2004, 2008, 2012, 2016, 2020, 2024, 2028, 2032, 2036, 2040, 2044, 2048.

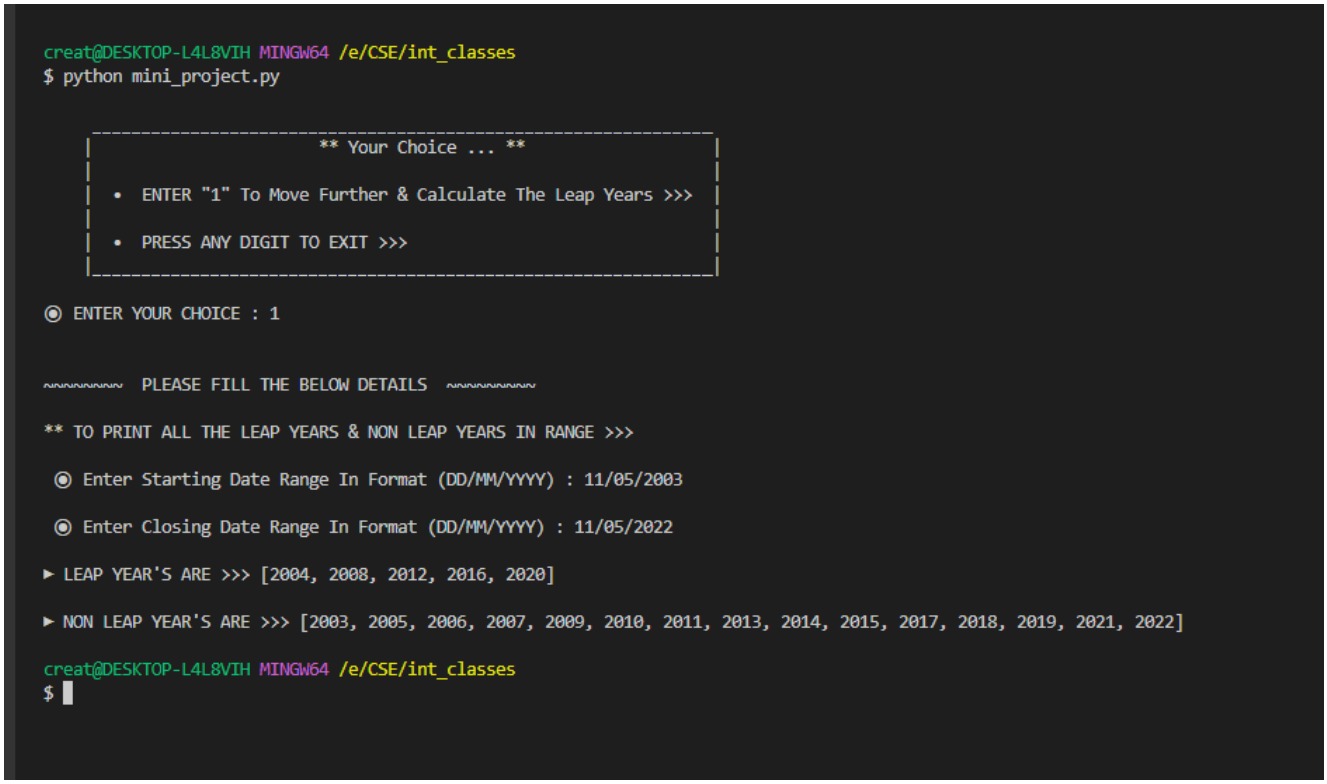
Non leap years are: 2001,2002,2005,2006,2007----------

(Student is free to decide the input and output layout for this mini project)

SOURCE CODE :-

```
from datetime import date

def main():

    print('''
     _____________________________________________________________
    |                       ** Your Choice ... **                 |
    |                                                             |
    |  •  ENTER "1" To Move Further & Calculate The Leap Years >>>|
    |                                                             |
    |  •  PRESS ANY DIGIT TO EXIT >>>                             |
    |_____________________________________________________________|       ''')

    print("")

    User_Choose = int(input("◉  ENTER YOUR CHOICE : "))
    print("")
    print("")

    if User_Choose == 1:
        print("~~~~~~~~~  PLEASE FILL THE BELOW DETAILS  ~~~~~~~~~")
        print("")

        print("TO PRINT ALL THE LEAP YEARS & NON LEAP YEARS IN RANGE >>>")
        print("")
        First_date = input(" ◉  Enter Starting Date Range In Format (DD/MM/YYYY) : ")
        print("")

        Current_Date = input(" ◉  Enter Closing Date Range In Format (DD/MM/YYYY) : ")
        print("")

        list1 = First_date.split("/")
        list2 = Current_Date.split("/")

        start_year = int(list1[2])
        end_year = int(list2[2])

        leap_year = []
        non_leap_year = []
        for x in range(start_year, end_year + 1):
            if (x % 400 == 0) and (x % 100 == 0):
                leap_year.append(x)

            elif (x % 4 == 0) and (x % 100 != 0):
                leap_year.append(x)
            else:
                non_leap_year.append(x)
    else:
        print("Exited >>>")
        exit()
    print(f" ► LEAP YEAR'S ARE >>> {leap_year}")
    print("")
    print(f" ► NON LEAP YEAR'S ARE >>> {non_leap_year}")

main()
```

OUTPUT :-



This mini project is basically a Leap year finder

We have created a functionality in which when user will input a range of two dates , then our module will find and print all leap years and non leap years in given range seperately.

Code explanation :-

1) Firstly, we import date from datetime
2) Then we take two inputs from user and split by “/ ” seperated (in dd/mm/yyyy format)and then stored them in two different lists(list1,list2)
3) Then we stored the Year(start_year, end_year) from user’s date in different variable by converting into integer
4) Then we create two different lists (lear_year, non_leap_year)
5) By applying for loop in start_year to end_year , now we check our leap year condition by the help of if,elif and else condition (A leap year is found by checking the divisibility of the year with 4 and 400. If a year is perfectly divisible by 4, then it is a Leap year.)
6) Then we stored seperated leap year and non lear year in different variable and print them which is our required condition