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IPO Chart

Variable	Data type	Input	Processing	Output
month	integer	x		x
day	integer	x		x
year	integer	x		x
n1	integer		x	
n2	integer		x	
n3	integer		x	
n4	integer		x	
mjd	integer		x	x

Formulas

n1 ← INT[(14− month) / 12] { Note: rounded to the nearest integer }

n2 ← (month − 3) + (12 × n1) { Note: rounded to the nearest integer }

n3 ← year + 4800 − n1 { Note: rounded to the nearest integer }

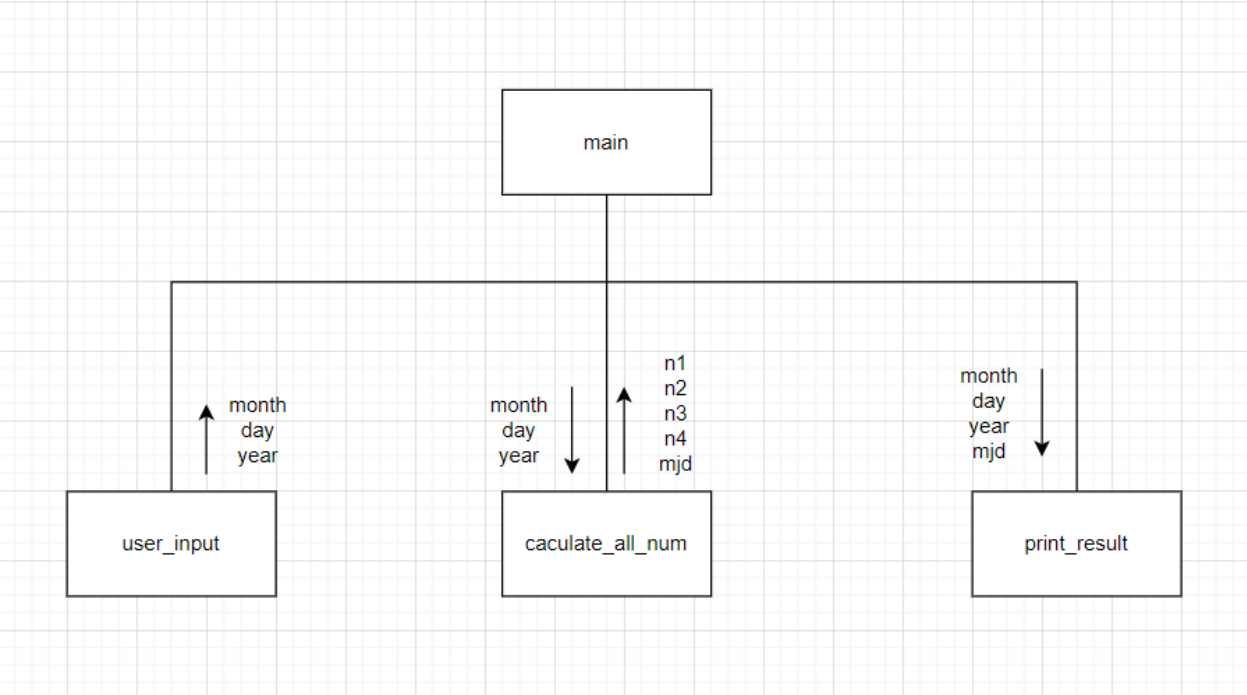
n4 ← INT[n3/ 4] − INT[n3/ 100] + INT[n3/ 400] { Note: rounded to the nearest integer }

mjd ← day + INT[((153 × n2) + 2) / 5] + (365 × n3) + n4− 2432046 { Note: rounded to the nearest integer }

Testing data table

#	month	Day	year	n1	n2	n3	n4	mjd
1	1	1	2001	1	10	6800	1649	51910
2	9	9	2024	0	6	6824	1655	60562
3	6	1	1972	0	3	6772	1642	41469

Structure Chart



Pseudocode

```
BEGIN main()
        Declare month, day, year, n1, n2, n3, n4, mjd as Integer
        Call user_input(day, month, year)
        Call caculate_all_num(n1, n2, n3, n4, mjd, month, day, year)
        Call print_result(day, month, year, mjd)
END

BEGIN user_input( out day as Integer, out month as Integer, out year as Integer)
        Write “Enter a month number (Jan = 1, Feb =2...): “
        Input month
        Write “Enter a day number (1...31)                    : “
        Input day
        Write “Enter a year using four digits                 :  “
        Input year
END
```