

golang

day #1 assignment

Assignment #1

Date validation

Implement the body for the following function:

```
func isValidDate(year, month, day){  
    // do stuff here  
    return False  
}
```

The function should check if the parameter values constitute a valid calendar date or not. Accordingly return True or False.

For example,

1. year=2018, month=13, day=1 is an invalid date as the possible values for month is 1 to 12.
2. year=2018, month=2, day=29 is an invalid date as the maximum days in February is 28 in the year 2018
3. year=2016, month=2, day=29 is a valid date.

In the `main` function, call the above function for inputs entered by the user and verify that the function `isValidDate` works fine.

Assignment #2

Prime or not?

Implement the body for the following function:

```
func isPrime(num int) bool {  
    // do stuff here  
    return false  
}
```

The function should check and return true only if the number passed as argument is a prime number.

In the main function, accept the input from the user, and print if it is a prime or not using the above function

Assignment #3

Sum of prime numbers

Write a **go** function called "sumOfPrimes", that takes two integers as input and returns the sum of all the prime numbers between the same.

```
func sumOfPrimes(from, to int) int {  
    // do stuff here  
    return 0  
}
```

In the **main()** call the above function for inputs entered by the user.

Assignment #4

Sine of an angle

In trigonometry, the Sine of an angle in **radians** is represented by the series below:

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \dots = \sum_{n=0}^{\infty} \frac{(-1)^n x^{2n+1}}{(2n+1)!}$$

Write a **go** function that accepts angle in **degrees** and returns the sine of the given angle.

Call the function in **main()**, by supplying input accepted from the user.

PS:

- Divide the function into small reusable functions, if possible.
 - Do not use builtin go library methods. The key is to implement your own logic using basic constructs like **if**, **switch** and/or **for**.
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Assignment #5

Calendar for given month and year

Implement the **go** function listed below:

```
func printCalendar(month, year int) {  
    /// do stuff here  
}
```

The function should accept **month** and **year** and print the calendar for the same. If inputs are invalid, appropriate error message/s should be printed.

Sample output for the inputs (8, 2018):

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

PS:

- Do not use any builtin library
- Divide the function into small reusable functions, if possible.