

THE UNIVERSITY OF THE WEST INDIES  
Department of Computing  
COMP1126–Introduction to Computing I  
Tutorial 3A

**Question 1**

Write a function `future_date` that takes three parameters `year`, `month` and `day` (which represents a date) and returns `True` if the date is in future and `False` otherwise. These calculations are done by capturing the current date. The code given below captures the current date where the variables `current_year` contains the value for present year, `current_month` contains the value for the present month and `current_day` contains the value for the present day. Use these variables to check if the input date is in future.

```
import datetime

def future_date(yy,mm,dd):
    date=datetime.datetime.now()
    current_year = date.year
    current_month = date.month
    current_day = date.day
```

**Question 2**

Typically programming languages have primitive `div` (i.e. `/`) and `mod` (i.e. `%`) operators. Assume that these operators do not exist in python and you have to write your own functions.

`div` takes two integers as input and keeps on subtracting the second from the first until the first number becomes less than the second number. The function keeps a track of how many times the second number is subtracted from the first and returns that number as the answer.

`mod` also takes two integers as input and keeps on subtracting the second from the first until the first number becomes less than the second number. When the first number becomes less than the second, the value of the first number is the answer.

Write these two functions first iteratively and then recursively in python:

- i) **div** (division) e.g. (**div 11 3**) => 3
- ii) **mod** (remainder) e.g. (**mod 11 3**) => 2

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