APS106 - LAB #4

This lab will test your ability to use various selection constructs (if, elif, else) in a program that makes decisions based on the value of passed parameters. The use of for loop is optional. ***Due: 11:59pm, Friday, Feb 15, 2019***

Question: Write a function that is passed a year, a month and a day, and then returns the season, and the number of days past since the beginning of this season as a two-element list. For the purposes of this lab, you may assume that spring, summer, autumn, and winter begin on the 21st day of March, June, September, and December, respectively. ***Make sure to pay attention to leap years (google how to check for leap years).***

If program is passed an invalid entry for the month or the day, the program should return ['invalid month', -1] or ['invalid day', -1], respectively. If passed both an invalid month and an invalid day, the program should return ['invalid month', -1].

Sample Inputs and Outputs:
Inputs: seasons(year, month, day)

```
seasons(1998, 3, 22)
seasons(1998, 0, 40)
seasons(1998, 1, 32)
seasons(1998, 2, 29)
seasons(2000, 2, 29)
```

Output

```
['spring', 1]
['invalid month', -1]
['invalid day', -1]
['invalid day', -1]
['winter', 70]
```

Hint:

- You may want to calculate the number of days between Jan 1 and the input date.
- You may find creating a list of days for each month helpful for your calculation.
- Be careful with winter, as it extends over the end of the year.

TO DO

- Download the file Lab4.py and complete the functions according to the descriptions.
- Test your code on MarkUS and Submit the final version of your code.

IMPORTANT: Do not change the file name or function names. Do not use input() or print(). Your submission file should not contain any additional lines of code outside the function definitions. Test cases are provided on MarkUS. Additional cases will be used in grading.