Lab 3.3 - Let Me Check My Calendar

In this lab, you will write custom blocks that take arguments and are useful for calculations involving dates and calendars.

Part 1: Basics

1. Write a custom Snap! block called `month name` that takes a number between 1 and 12 as an argument and says the name of the corresponding month.

2. Write a custom Snap! block called `day name` that takes a number between 1 and 7 as an argument and says the name of the corresponding day. For our purposes, the week begins on Sunday.

3. Write a custom Snap! block called `days in` that takes a month name as an argument and says how many days are in that month. Assume a non-leap year.

Part 2: Going Farther

1. Write a custom Snap! block called `is a leap year` that takes a year number as an argument and says whether or not that year is a leap year.

    - A year is a leap year if the year is a multiple of 4 that is not a multiple of 100 (e.g. 1984), or if it is a multiple of 400 (e.g. 2000). Years that are multiples of 100 but not multiples of 400 are NOT leap years (e.g. 1800). See Wikipedia for more detail.

2. Write a custom Snap! block called `is a valid date` that takes a month name and a date as arguments and says whether or not that date exists in that month. For example, the 31st is a valid date in January, but not in June. The 5th is a valid date in every month, and the 40th is not a valid date in any month.

3. Write a custom Snap! block called `day in year` that takes a year number and a number between 1 and 366 and says the date that corresponds to that numbered day of the specified year. For example, in non-leap years day #1 is January 1, day #32 is February 1, day #365 is December 31, and day #185 is July 4. Give an error message if the number is 366 and a non-leap year is specified.

4. BONUS: Determine the day you were born. Write a custom Snap! block called `day of week` that takes a month name, date, and year as arguments and says the day of week on which that date falls in that year. See http://en.wikipedia.org/wiki/Determination_of_the_day_of_the_week for information on finding the day of the week from a date.

Grading Scheme/Rubric

Lab 3.3 Criteria	Points
1.1 month name	0.5
1.2 day name	0.5
1.3 days in	0.5
2.1 is leap year	0.5
2.2 is a valid date	0.5
2.3 day in year	0.5
2.4 Bonus: day in week	0.5
PROJECT TOTAL	**3.0 points**