CSC 242 Section 504 Winter 2017
Homework Assignment 4

Due date as specified on D2L

This assignment is worth 2% of your overall grade, and therefore will be graded on a scale of 0-2. Please upload a file containing your competed code onto D2L by the due date. While you may discuss the assignment with others, **you must write your code by yourself,** without assistance from other students or anyone else. Please see the course syllabus for details, and for my late homework submission policy.

Your assignment is to write the following magic methods for the `Date` class. Each method is worth .5 points.

1. __eq__ returns True if two Date objects have the same month, day, and year.

2. __add__ is passed an int as a parameter, and adds that number of days to the Date. It is **nondestructive**. For example:

```
>>> d = Date(1,31,2017)
>>> d + 5
Date(2,5,2017)
>>> d
Date(1,31,2017)
```

3. __getitem__ is passed either an int between 0 and 2, or a str ‘month’, ‘day’, or ‘year’. It returns the appropriate instance variable from the Date object, or raises an exception otherwise. For example:

```
>>> d = Date(2,1,2017)
>>> d[0]
2
>>> d[2]
2017
>>> d[‘day’]
1
>>> d[4] # should raise an IndexError
```

4. __setitem__ is passed an index (as described in problem 4) and an integer, and sets the month, day, or year of the Date object to be that integer. If the index is not of the correct type or value, then an exception is raised. For example:

```
>>> d = Date(2,1,2017)
>>> d[0] = 5
>>> d
Date(5,1,2017)
>>> d[‘year’] = 2020
>>> d
Date(5,1,2020)
>>> d[‘moth’] = 31    # should raise an IndexError
```

Your will receive extra credit if you correctly implement the method below. A correctly implemented version is worth .5 points extra credit.

5. **__radd__** is passed an integer, and modifies the Date object to be the specified number of days into the future. It is **destructive.** For example:

   ```
   >>> d = Date(2,1,2017)
   >>> d += 28
   >>> d
   Date(3,1,2017)
   ```