CSC 241

Exercise 2

The following date of the form: **MM-DD-YYYY** would be palindromic if it read the same way backwards: **YY-YY-DDMM**.

For example, the date: **12-02-2021** is palindromic.

Write a method **getPalindromicDate** that takes an integer (a year) as input and then returns a palindromic date. The palindromic date should be stored in a stack based data structure using dynamic memory allocation (LinkedStack). If the year does not give a palindromic date, then the returned stack will be null.

Only Gregorian calendar dates are allowed and the stack should maintain the ordering of the dates as:
MM

DD

YYYY

Where **MM** is the top of the stack. MM and DD must be two digits, so if there is a single digit a zero must precede it. For example, the following date: 03-12-2130. The following palindrome would not be a valid palindromic date: 40-52-2504, because there is not a 40th month of the year, nor a 52nd day in any given month.

Write a driver program that will test the **getPalindromicDate** method by printing out the stack returned with the appropriate formatting to appear palindromic and as a date, given there is such a date for the given year.