Date class specifications
Gathered from class discussions on 9/14/2015

Description: Constructor
Preconditions: month, day and year combination must translate to a valid date (ex: February 30, 2012 would be invalid)
Postcondition: A Date instance will be constructed and returned
Parameters:
  - month – int – numeric representation of month (1-12)
  - day – int – numeric representation of day of month
  - year – int – numeric representation of year (ex: 2015)
throws: IllegalArgumentException if values don’t represent a valid date
public Date(int month, int day, int year)

Description: formats Date instance in words (ex: March 4, 2015) and returns the string
Preconditions: none
Postcondition: no change to instance
Parameters: none
Returns: formatted String with text representation of date
public String formatAsWords()

Description: formats Date instance in numeric representation (ex: 3/21/2015) and returns the string
Preconditions: none
Postcondition: no change to instance
Parameters: none
Returns: formatted String with numeric representation of date
public String formatAsNumbersUS()

Description: formats Date instance in numeric representation used internationally (ex: 21.3.2015) and returns the string
Preconditions: none
Postcondition: no change to instance
Parameters: none
Returns: formatted String with international numeric representation of date
public String formatAsNumbersIntl()

Description: advances date by one day, appropriately handling month and year rollover, as well as leap years
Preconditions: none
Postcondition: month, day, and year values will be modified as necessary to represent the next day’s date
Parameters: none
Returns: none
public void advance()

Description: advances date by provided number of days, appropriately handling month and year rollover, as well as leap years
Preconditions: none
Postcondition: month, day, and year values will be modified as necessary to represent the date when advanced by the parameter days
Parameters: none
Returns: none

public void advanceBy(int days)

Description: returns the day of the week corresponding to the Date instance
Preconditions: none
Postcondition: no changes to the instance
Parameters: none
Returns: String representing day of week (ex: “Wednesday”)

public String getDayOfWeek()

Description: calculates the number of days between the instance and the provided Date object
Preconditions: Date must be a valid instance (not null)
Postcondition: no changes to the instance
Parameters: d – Date – the date from which you want to calculate the number of days from this instance
Returns: integer representing number of days between parameter d and this instance
throws: IllegalArgumentException if Date parameter is null

public int DaysFrom(Date d)

Description: creates an independent copy of the Date instance
Preconditions: none
Postcondition: no changes to the instance
Parameters: none
Returns: Date instance that is a copy of this instance
throws: CloneNotSupportedException if Clone interface is not implemented on Date

public Date clone()

Description: Compare attributes of obj parameter and this instance to see if the two objects are equal
Preconditions: none
Postcondition: no changes to the instance
Parameters: Object – obj – the object being compared to this instance
Returns: true or false (true of this instance and obj are equivalent)
throws: none

public boolean equals(Object obj)
Description: returns day attribute of this instance
Preconditions: none
Postcondition: no changes to the instance
Parameters: none
Returns: int – day attribute of this instance
throws: none
public int getDay()

Description: returns year attribute of this instance
Preconditions: none
Postcondition: no changes to the instance
Parameters: none
Returns: int – year attribute of this instance
throws: none
public int getYear()

Description: returns month attribute of this instance
Preconditions: none
Postcondition: no changes to the instance
Parameters: none
Returns: int – month attribute of this instance
throws: none
public int getMonth()

Description: returns string representation of this instance
Preconditions: none
Postcondition: no changes to the instance
Parameters: none
Returns: String – representation of this instance (ex: March 4, 2015)
throws: none
public String toString()