Analysis Documentation

Analyst Name: Bradley Kirkbride-Taylor   
Project Name: Assignment 3  
Date Created: October 1, 2015

# Program Inputs

* day –a value entered by the user between 1-31
* month – a value entered by the user between 1-12
* year- a value entered by the user 1582 - 9999

# Processing

* Check if day value is greater than 0 and less than 32
* Check if month value is between 1 and 12
* Check if day value is valid value for the given month value
  + If month = 1 or 3 or 5 or 7 or 8 or 10 or 12 then day is valid between 1 -31 inclusive.
  + If month = 4 or 6 or 9 or 11 then day is valid between 1-30 inclusive.
  + If month = 2 check if it is a leap year. If it is a leap year then day is valid from 1-29 inclusive. If it isn’t a leap year then day is valid from 1-28 inclusive.
* Check if year is greater than or equal to 1582 and less than 10000.
* If date is February 29th check if it is leap year the formula for this is

year%4 == 0 && ( year%100 != 0 || year %400 == 0)

* If day and month are both valid then add them to resultDate. The formula for this is resultDate = “Name of month” + day + “, “
* Add the year to create the result date (Month name date, year)

resultDate = resultDate + year

# Program Outputs

* Print “Day: “
* Print “Month: “
* Print “Year: “
* Print “Invalid day value”
* Print “Invalid day value for the month specified”
* Print “Invalid moth value”
* Print “Invalid year value”
* Print “February only has 29 days on a leap year”
* Print resultDate (this is the variable that is created by user input)

# Other Considerations

* Calculating if it is a leap year for the inputted date.
* The year has to be a less than 10000.
* Entering a negative number or non-numeric value will result in an error.