

## One Page Calendar

### FORM AND ITS COMPONENTS: ( GUI)

**ONE PAGE CALENDAR**

Enter The Year   → gobutton

**DATE**

year

					MONTH						
1	8	15	22	29	Mon	Tue	Wed	Thu	Fri	Sat	Sun
2	9	16	23	30	Tue	Wed	Thu	Fri	Sat	Sun	Mon
3	10	17	24	31	Wed	Thu	Fri	Sat	Sun	Mon	Tue
4	11	18	25		Thu	Fri	Sat	Sun	Mon	Tue	Wed
5	12	19	26		Fri	Sat	Sun	Mon	Tue	Wed	Thu
6	13	20	27		Sat	Sun	Mon	Tue	Wed	Thu	Fri
7	14	21	28		Sun	Mon	Tue	Wed	Thu	Fri	Sat

monthdrop ← To search particular date

Month Date

datedrop

- All the dates and days of the week are hard coded by putting textboxes suitably in the table.
- The textboxes for months (blank in this picture) are named as follows: All in first column as a1 to a7, in second column as b1 to b7 and in third column as c1 to c7.
- The textboxes for days are named as box1 to box49(row major form).

## DATA STRUCTURE:

Two collections are used

1. For grouping all the textboxes for the months (a1 to a7, b1 to b7 and c1 to c7).  
The name is all. [ USED IN MAIN SEGMENT]
2. For grouping all the textboxes for the day of the week( box1 to box49). The name is boxes. [ used in additional feature]

**ONE PAGE CALENDAR**

Enter The Year

**DATE**

MONTH

1	8	15	22	29	Mon	Tue	Wed
2	9	16	23	30	Tue	Wed	Thu
3	10	17	24	31	Wed	Thu	Fri
4	11	18	25		Thu	Fri	Sat
5	12	19	26		Fri	Sat	Sun
6	13	20	27		Sat	Sun	Mon
7	14	21	28		Sun	Mon	Tue

To search particular date

Month Date

all

boxes

## **MAIN SEGMENT:**

The following functions are used to make the one-page calendar:

NAME OF THE FUNCTION/SUB ROUTINE	PARAMETERS	DESCRIPTION	RETURN VALUE
Year_TextChanged	sender as Object, e As EventArgs	Called whenever the text input to the textbox 'year' changes. It does a few checks on the entered string and calls the Button1_Click sub routine if the checks are passed. This sub routine brings dynamism to the calendar.	None
Button1_Click	sender as Object, e As EventArgs	Called whenever Button1 is clicked or on pressing the 'enter' key. It does multiple checks to validate if the string entered in the Year textbox is a valid year between 1 and 9999. If the string passes all the tests, it calls the sub routine printcalendar().	None
printcalendar	year as Integer	Uses a loop from 1 to 12 inside which the functions algo and getMonth are called (12 times, once for each month) and places each month in its appropriate textbox.	None
algo	year as Integer, month as Integer, inputdate as Integer	Using the <a href="#">zeller's congruence</a> relation, it determines which day of the week the date passed to it is.	Returns 'd' as Integer. 'd' ranges from 1 to 7; 1: Monday, 2: Tuesday....
getMonth	month as Integer	Converts an integer into its month equivalent (a string) using a switch case. Eg: if 1 is passed to it, it returns 'January'	Returns a string which is the name of one of the 12 months.

### **Additional feature:**

This feature allows user to highlight an exact date of a particular month, making it easier to locate what day of the week it is. It can only be used when the user has already given a valid input to the 'year' textbox. The following functions are involved:

NAME OF THE FUNCTION/ SUB ROUTINE	PARAMETERS	DESCRIPTION	RETURN VALUE
ComboBox2_SelectedIndexChanged	sender as Object, e As EventArgs	It ensures that the text of the datedrop remains valid even if we change the month. Eg: if date selected was 31 and we change the month to February, the datedrop's text is made empty. Also, it then adds items to datedrop depending on which month is selected( using the NoofDays function). It calls the function highlighter at the end.	None
NoofDays	year as Integer,month as Integer	It calculates the number of days in the given month on the given year.	An integer (either 28,29,30 or 31)
Datedrop_SelectedIndexChanged	sender as Object, e As EventArgs	Calls the highlighter function.	None
highlighter	None	Using the values entered by user for year, month and date; the function highlights the day of the week that this date is. It uses function algo for the same.	None

### **ERROR CHECKS ON THE STRING ENTERED BY USER IN TEXTBOX 'YEAR':**

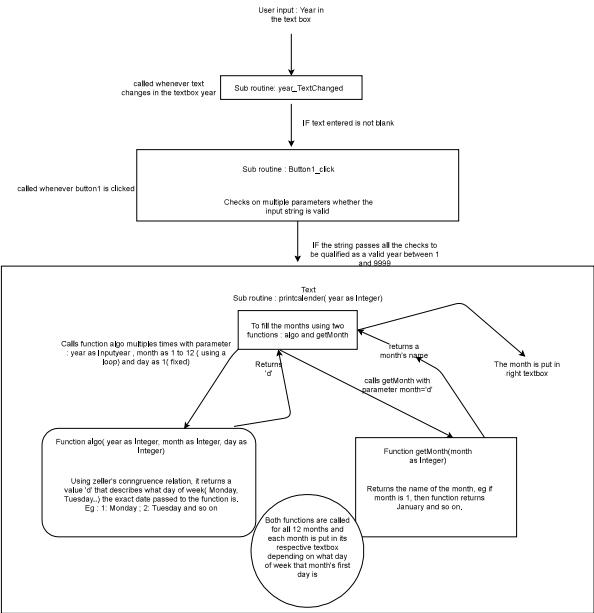
1. If input string is empty
2. If input string starts contains any special character like , ( ) - \* + / - @etc.
3. If input string contains spaces
4. If input string is more than 4 digits long after removing starting 0's, starting +(if there is a single + only), and starting and ending white spaces
5. If input string contains anything other than digits

### **FUTURE PROSPECTS:**

- There is a scope of dealing with screen resizing according to the size of the window.
- A list of public holidays can also be displayed

\*\*\* The software requires around 10 MB of RAM for operating.

FLOWCHART FOR  
MAIN SEGMENT



monthdrop and datedrop are enabled only after a valid user input for year is obtained

## FLOWCHART FOR ADDITIONAL FEATURE

