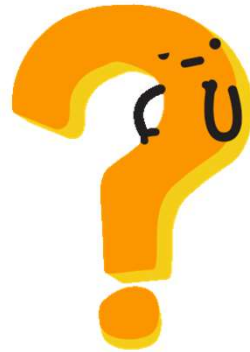# Project

Days Until Birthday

Create a program that calculates and displays the number of days remaining until the user's next birthday. The program should prompt the user to enter Current Date (day and month) ,then prompt the user to enter their birth date (day and month) and then calculate the days between the current date and their upcoming birthday. If the birthday is today, it should display a congratulatory message instead. The program should consider leap years if applicable.

Main Menu

1. Welcome the user and tell about the app

2. Use Printf and \t \n

```
**********************************************
* Welcome to the Birthday Countdown App! *
**********************************************

This app will help you find out how many days are left until your next birthday!
```

Taking Input

1. The program should prompt the user to enter Current Date (day and month) ,then prompt the user to enter their birth date (day and month)

2. Use Printf and Scanf, Will need some variables for Scanf

```
Enter the current month (1-12):
Enter the current day (1-31):
Enter your birth month (1-12):
Enter your birth day (1-31):
```

Validating Inputs

1. Validate the inputs

2. Current and Birth Days should be greater than 0 and less than or equal to 31

3. Current and Birth Months should be greater than 0 and less than or equal to 12

4. Use if with OR (||) to combine both conditions.

Days Left Calculation

1. Make a Variable to store the days remaining

2. **If the Birth Month Matches the Current Month**

If (BirthMonth == currentMonth)

if the user was born in March, it would calculate birthDay - currentDay

For example, if today were March 1 and their birthday was March 15, daysRemaining = 15 - 1 = 14.

Days Left Calculation

3. If the Birth Month is After the Current Month

If (birthMonth > currentMonth)

birthday is later in the year.

daysRemaining = (birthMonth - currentMonth) * 30 + (birthDay - currentDay);

Days Left Calculation

For example, if the current date is March 15 and the birthday is June 10:

birthMonth - currentMonth is 6 - 3 = 3 months away.

3 * 30 = 90 days (approximate days for 3 months).

Then, birthDay - currentDay gives 10 - 15 = -5 days.

The total is 90 + (-5) = 85 days.

Days Left Calculation

4. If the Birth Month is Before the Current Month

If birthMonth < currentMonth

daysRemaining = (12 - currentMonth + birthMonth) * 30 + (birthDay - currentDay);

For example, if today is November 15 (month 11) and the birthday is March 10:

12 - currentMonth + birthMonth is 12 - 11 + 3 = 4 months away.

4 * 30 = 120 days.

birthDay - currentDay gives 10 - 15 = -5 days.

Total is 120 + (-5) = 115 days.

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Displaying Birthday based on days remaining

Birthday Today

if(daysRemaining == 0): If daysRemaining is exactly zero, print "Happy Birthday!".

Birthday Within 30 Days

else if (daysRemaining < 30 && daysRemaining > 0):
For birthdays within the next month, print "Your birthday is just around the corner!".

Birthday in a Few Months

else if (daysRemaining >= 30 && daysRemaining <= 180):
For birthdays between 1 month and 6 months away, print "Your birthday is a few months away.".

Birthday in Almost a Year

else: If the birthday is more than 6 months away, print "Your birthday is in almost a year!".

Displaying Birthday based on days remaining

Birthday Today

if(daysRemaining == 0): If daysRemaining is exactly zero, print "Happy Birthday!".

Birthday Within 30 Days

else if (daysRemaining < 30 && daysRemaining > 0):
For birthdays within the next month, print "Your birthday is just around the corner!".

Birthday in a Few Months

else if (daysRemaining >= 30 && daysRemaining <= 180):
For birthdays between 1 month and 6 months away, print "Your birthday is a few months away.".

Birthday in Almost a Year

else: If the birthday is more than 6 months away, print "Your birthday is in almost a year!".

```
BEGIN

DISPLAY welcome message and app description

// Step 1: Get the current date from the user
PRINT "Enter the current month (1-12): "
READ currentMonth

PRINT "Enter the current day (1-31): "
READ currentDay

// Step 2: Validate the current date
IF currentMonth < 1 OR currentMonth > 12 THEN
    PRINT "Invalid month! Please enter a number between 1 and 12."
    EXIT program

IF currentDay < 1 OR currentDay > 31 THEN
    PRINT "Invalid day! Please enter a number between 1 and 31."
    EXIT program
```

```
// Step 3: Get the birth date from the user
PRINT "Enter your birth month (1-12): "
READ birthMonth

PRINT "Enter your birth day (1-31): "
READ birthDay

// Step 4: Validate the birth date
IF birthMonth < 1 OR birthMonth > 12 THEN
    PRINT "Invalid birth month! Please enter a number between 1 and 12."
    EXIT program

IF birthDay < 1 OR birthDay > 31 THEN
    PRINT "Invalid birth day! Please enter a number between 1 and 31."
    EXIT program

// Step 5: Calculate the number of days remaining until the birthday
SET daysRemaining TO 0

IF birthMonth == currentMonth THEN
    SET daysRemaining TO birthDay - currentDay
ELSE IF birthMonth > currentMonth THEN
    SET daysRemaining TO (birthMonth - currentMonth) * 30 + (birthDay - currentDay)
```

```
ELSE
    SET daysRemaining TO (12 - currentMonth + birthMonth) * 30 + (birthDay - currentDay)


// Step 6: Display the days remaining
PRINT daysRemaining + " days remaining"


// Step 7: Display a message based on the days remaining
IF daysRemaining == 0 THEN
    PRINT "Happy Birthday!"
ELSE IF daysRemaining > 0 AND daysRemaining < 30 THEN
    PRINT "Your birthday is just around the corner!"
ELSE IF daysRemaining >= 30 AND daysRemaining <= 180 THEN
    PRINT "Your birthday is a few months away."
ELSE
    PRINT "Your birthday is in almost a year!"


END
```

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