Python Program to Check if a Date is Valid and Print the Incremented Date if it is

This is a Python Program to check if a date is valid and print the incremented date if it is.

**Problem Description**

The program takes in a date and checks if it a valid date and prints the incremented date if it is.

**Problem Solution**

1. Take in the date of the form: dd/mm/yyyy.  
2. Split the date and store the day, month and year in separate variables.  
3. Use various if-statements to check if the day, month and year are valid.  
4. Increment the date if the date is valid and print it  
5. Exit.

**Program/Source Code**

Here is source code of the Python Program to check if a date is valid and print the incremented date if it is. The program output is also shown below.

date=input("Enter the date: ")

dd,mm,yy=date.split('/')

dd=int(dd)

mm=int(mm)

yy=int(yy)

**if**(mm==1 **or** mm==3 **or** mm==5 **or** mm==7 **or** mm==8 **or** mm==10 **or** mm==12):

max1=31

**elif**(mm==4 **or** mm==6 **or** mm==9 **or** mm==11):

max1=30

**elif**(yy%4==0 **and** yy%100!=0 **or** yy%400==0):

max1=29

**else**:

max1=28

**if**(mm<1 **or** mm>12):

**print**("Date is invalid.")

**elif**(dd<1 **or** dd>max1):

**print**("Date is invalid.")

**elif**(dd==max1 **and** mm!=12):

dd=1

mm=mm+1

**print**("The incremented date is: ",dd,mm,yy)

**elif**(dd==31 **and** mm==12):

dd=1

mm=1

yy=yy+1

**print**("The incremented date is: ",dd,mm,yy)

**else**:

dd=dd+1

**print**("The incremented date is: ",dd,mm,yy)

**Program Explanation**

1. User must enter the date of the form dd/mm/yy.  
2. The date is then split and the day, month and year is stored in separate variables.  
3. If the day isn’t between 1 and 30 for the months of April, June, September and November, the date is invalid.  
4. If the day isn’t between 1 and 31 for the months January, March, April, May, July, August, October and December, the date is invalid.  
5. If the month is February, the day should be between 1 and 28 for years other than the leap year and between 1 and 29 for leap years.  
6. If the date is valid, the date should be incremented.  
7. The final result is printed.

**Runtime Test Cases**

Case 1

Enter the date: 5/7/2016

The incremented date is: 6 7 2016

Case 2

Enter the date: 30/2/1997

Date is invalid.

Case 3

Enter the date: 31/12/2016

The incremented date is: 1 1 2017