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 is 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. Asks the user to Press Enter to Exit! The program’s current window.

**The Program/Source Code**

Here is the source code of the Python Program that checks if a date is valid and prints the incremented date if it is. The program output is also shown below.

date = input("Enter the date please: ")

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+=1

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

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

dd=1

mm=1

yy+=1

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

else:

dd+=1

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

input("Press Enter to Exit! ")

**Sample Runtime Test Cases**

1. **Enter the date please: 12/12/2001**

**The incremented date is: 13 12 2001**

**Press Enter to Exit!**

1. **Enter the date please: 31/9/2017**

**Date is invalid.**

**Press Enter to Exit!**

1. **Enter the date please: 31/12/2018**

**The incremented date is: 1 1 2019**

**Press Enter to Exit!**

**Brief Program Explanation**

1. User must enter the date in 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 output as shown in the sample runtime above.