Experiment - 3

```
#Qn 1

n = int(input("Enter the number to check whether it is divisible by both 3 and 5:"))

if (n%3==0 and n%5==0):

print("Yes it is divisible by both 3 and 5.")

else:

print("No it is not divisible by both 3 and 5.")

#Qn 2

num = int(input("Enter the number to check whether it is a multiple of 5 or not:"))

if (num%5==0):

print("Yes it is a multiple of 5.")

else:

print("No it is not a multiple of 5.")

#Qn 3

print("Enter the two numbers to find the greatest among them.")

n1 = int(input("Enter the first number:"))

n2 = int(input("Enter the second number:"))

if (n1>n2):

print("The greatest number among them is:",n1)

else:

print("The greatest number among them is:",n2)

if (n1==n2):
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print("The numbers are equal.")

#Qn 4

print("Enter the numbers to find the greatest among them.")

num1 = int(input("Enter the first number:"))

num2 = int(input("Enter the second number:"))

num3 = int(input("Enter the third number:"))

if(num1>num2 and num1>num3):

print("The greatest number among them is:",num1)

elif(num2>num1 and num2>num3):

print("The greatest number among them is:",num2)

else:

print("The greatest number among them is:",num3)

#Qn 5

print("Enter the values of a,b and c to find the nature of roots of the quadratic
equation:")

a = int(input("Enter the value of a:"))

b = int(input("Enter the value of b:"))

c = int(input("Enter the value of c:"))

D=pow(b,2)-4*a*c

if (D>0):

print("The roots are real and distinct.")

elif (D<0):

print("The roots are imaginary.")

else:
```

```
print("The roots are real and equal.")

x_pos=(-b+pow(D,0.5))/(2*a)

x_neg=(-b-pow(D,0.5))/(2*a)

print("The first root is:",x_pos)

print("The second root is:",x_neg)

#Qn 6

yr=int(input("Enter the year to check whether it is a leap year or not:"))

if (yr%4==0):

print("Yes " + (str(yr)) +" is a leap year.")

else:

print("No " + (str(yr)) +" is not a leap year.")

#Qn 7

print("Enter the date to display the next date: ")

d = int(input("Enter the day:"))

m = int(input("Enter the month:"))

y = int(input("Enter the year:"))

ud = 0

um = 0

uy = 0

if(y%4==0):

if(d==29 and m==2):

ud = 1

um = m+1

uy = y
```

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else:
if(d==28 and m==2):
ud = 1
um = m+1
uy = y
if(d==31 and m==1 or 3 or 5 or 7 or 8 or 10 or 12):
ud = 1
um = m+1
uy = y
if(d==30 and m==4 or 6 or 9 or 11):
ud = 1
um = m+1
uy = y
if(d==31 and m==12):
ud = 1
um = 1
uy = y+1
print("The next date is: "+(str(ud))+"/"+(str(um))+"/"+(str(uy)))
#Qn 8
print("Enter the details to prepare a grade sheet of a Student")
print("\t\t\t Grade Sheet")
print("------------------------------------------------------------")
name = input("Enter the name of the Student:")
sap = input("Enter the SAP ID:")
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sem = input("Enter the Semester:")

rn = input("Enter the roll number:")

cou = input("Enter the name of the course:")

print()

math = int(input("Enter the Math marks:"))

phy = int(input("Enter the Physics marks:"))

COA = int(input("Enter the COA marks:"))

DE = int(input("Enter the DE marks:"))

python = int(input("Enter the Python marks:"))

DSA = int(input("Enter the DSA marks:"))

EVS = int(input("Enter the EVS marks:"))

tot=math+phy+COA+DE+python+DSA+EVS

per=tot/7

cgpa=per/10

print("\n")

print("Name:\t\t",name.upper())

print("SAP ID:\t\t",sap)

print("Roll no.:\t",rn)

print("Course:\t\t",cou)

print("Sem:\t\t",sem)

print("\n")

print("Math:\t",math)

print("Physics:",phy)

print("COA:\t",COA)
```

```
print("DE:\t",DE)

print("Python:\t",python)

print("DSA:\t",DSA)

print("EVS:\t",EVS)

print("\n")

if(cgpa>=0 and cgpa<3.5):

grade="F"

elif(cgpa>=3.5 and cgpa<=5.0):

grade="C+"

elif(cgpa>5.0 and cgpa<=6.0):

grade="B"

elif(cgpa>6.0 and cgpa<=7.0):

grade="B+"

elif(cgpa>7.0 and cgpa<=8.0):

grade="A"

elif(cgpa>8.0 and cgpa<=9.0):

grade="A+"

elif(cgpa>9.0 and cgpa<=10.0):

grade="O"

print("Percentage: \t{:.2f}".format(per))

print("CGPA: \t\t{:.2f}".format(cgpa))

print("Grade: \t\t",grade)
```

Output:

```
PS C:\Users\amale\OneDrive\Desktop> py Exp3.py
Enter the number to check whether it is divisible by both 3 and 5:15
Yes it is divisible by both 3 and 5.
Enter the number to check whether it is a multiple of 5 or not:25
Yes it is a multiple of 5.
Enter the two numbers to find the greatest among them.
Enter the first number:23
Enter the second number:22
The greatest number among them is: 23
Enter the  numbers to find the greatest among them.
Enter the first number:12
Enter the second number:56
Enter the third number:22
The greatest number among them is: 56
Enter the values of a,b and c to find the nature of roots of the quadratic equation:
Enter the value of a:2
Enter the value of b:4
Enter the value of c:2
The roots are real and equal.
The first root is: -1.0
The second root is: -1.0
Enter the year to check whether it is a leap year or not:2024
Yes 2024 is a leap year.
Enter the date to display the next date:
Enter the day:31
Enter the month:12
Enter the year:2024
The next date is: 1/1/2025
```

```
Enter the details to prepare a grade sheet of a Student
                        Grade Sheet
------------------------------------------------------------
Enter the name of the Student:Swastika Karmakar
Enter the SAP ID:590012371
Enter the Semester:2
Enter the roll number:22403445787
Enter the name of the course:BTech CSE

Enter the Math marks:96
Enter the Physics marks:92
Enter the COA marks:88
Enter the DE marks:89
Enter the Python marks:95
Enter the DSA marks:93
Enter the EVS marks:95


Name:             SWASTIKA KARMAKAR
SAP ID:           590012371
Roll no.:         22403445787
Course:           BTech CSE
Sem:              2


Math:    96
Physics: 92
COA:     88
DE:      89
Python:  95
DSA:     93
EVS:     95


Percentage:     92.57
CGPA:           9.26
Grade:           O
```