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```
Number divisible by 3 & 5 both.
```

```
#2. Check whether a given number is multiple of five or not.
x = int(input("Enter a number:"))
if (x % 5 ==0):
  print("The Number is multiple of 5.")
else:
  print("Not a multiple of 5")
```

```
Enter a number:5123135
The Number is multiple of 5.
```

```
#3. Find the greatest among the two numbers. If numbers are equal than print "numbers are equal".
x = int(input("Enter 1st number:"))
y = int(input("Enter 2nd number:"))
if (x>y):
  print("Greater number is :",x)
elif(x==y):
  print("Numbers are equal")
else:
  print("Greater number is:",y)
```

```
Enter 1st number:45
Enter 2nd number:45
Numbers are equal
```

```
#4. Find the greatest among three numbers assuming no two values are same.
x = int(input("Enter 1st number:"))
y = int(input("Enter 2nd number:"))
z = int(input("Enter 3rd number:"))
if(x>y and x>z):
  print("Greater Number is:",x)
elif(y>z and y>x):
  print("Greater Number is:",y)
else:
  print("Greater Number is:",z)
```

```
Enter 1st number:2
Enter 2nd number:4
Enter 3rd number:1
Greater Number is: 4
```

```
#5. Check whether the quadratic equation has real roots or imaginary roots. Display the roots.

# We will only input the coefficeints of the quadratic equation.(ax^2 + bx + c = 0)
a = float(input("Enter a: "))
b = float(input("Enter b: "))
c = float(input("Enter c: "))

# Calculate the discriminant
d = (b**2) - (4*a*c)

if d > 0:
    # Real and Different
    root1 = (-b + d**0.5) / (2*a)
    root2 = (-b - d**0.5) / (2*a)
    print("Real Roots:", root1, "and", root2)

elif d == 0:
    # Real and Same
    root = -b / (2*a)
    print("One Real Root:", root)

else:
```

```
        r2 = (-b - (complex(d)**0.5)) / (2*a)
        print("Roots are Imaginary :",r1,r2)
```

```
Enter a: 1
Enter b: 1
Enter c: 1
Roots are Imaginary : (-0.49999999999999994+0.8660254037844386j) (-0.5-0.8660254037844386j)
```

```
#6. Find whether a given year is a leap year or not.
x = int(input("Enetr a year:"))
if(x%4==0):
  print(x,"is leap year")
elif(x%100==0):
  print(x,"is not leap year")
elif(x%400==0):
  print(x,"is leap year")
else:
  print(x,"is not leap year")
```

```
Enetr a year:2026
2026 is not leap year
```

```
#7. Write a program which takes any date as input and display next date of the calendar
#e.g.
#I/P: day=20 month=9 year=2005
#O/P: day=21 month=9 year=2005
day = int(input("day="))
month = int(input("month="))
year = int(input("year="))

# Find the max days in the current month

if month == 2:
    # Simplified Leap Year: divisible by 4
    if year % 4 == 0:
        limit = 29
    else:
        limit = 28
elif month in [4, 6, 9, 11]:
    limit = 30
else:
    limit = 31

# Update the date
day += 1

if day > limit:
    day = 1
    month += 1

    if month > 12:
        month = 1
        year += 1

print(f"Next Date: day={day} month={month} year={year}")
```

```
day=31
month=12
year=2005
Next Date: day=1 month=1 year=2006
```

```
#8. Print the grade sheet of a student for the given range of cgpa. Scan marks of five subjects and calculate the percenta
#CGPA=percentage/10
#CGPA range:
#0 to 3.4 -> F
#3.5 to 5.0->C+
#5.1 to 6->B
#6.1 to 7-> B+
#7.1 to 8-> A
#8.1 to 9->A+
#9.1 to 10-> O (Outstanding)
a = int(input("Enter 1st subject marks:"))
b = int(input("Enter 2nd subject marks:"))
f = int(input("Enter 3rd subject marks:"))
d = int(input("Enter 4th subject marks:"))
e = int(input("Enter 5th subject marks:"))
# Calculating percentage:
```

```
c = p/10
print("CGPA:",c)
if (c<=10 and c>=9.1):
  print("Grade:O")
elif(c<=9 and c>=8.1):
  print("Grade:A+")
elif(c<=8 and c>=7.1):
  print("Grade:A")
elif(c<=7 and c>=6.1):
  print("Grade:B+")
elif(c<=6 and c>=5.1):
  print("Grade:B")
elif(c<=5 and c>=3.5):
  print("Grade:C+")
else:
  print("Grade:F")
```

```
Enter 1st subject marks:36
Enter 2nd subject marks:96
Enter 3rd subject marks:75
Enter 4th subject marks:87
Enter 5th subject marks:45
CGPA: 6.780000000000001
Grade:B+
```

Vinit Ranjan

Github Link:
https://github.com/Roushan29416/PYTHON-
EXPERIMENT/blob/main/590029416_Roushan_Kumar_Experiment_2_.ipynb

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