

PYTHON LAB - 4

Control Statements

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1. Python program to check leap year.

```
Year = int(input("Enter year : ")) #Take user input
if (Year % 4 == 0 and Year % 100!=0) or (Year % 400 == 0):
    #checks condition whether the given year is divisible by 4
    and 400 and not by 100
    print(f"{Year} is leap year") #print this statement if
    condition is true
else:
    print(f"{Year} is not leap year") #print this statement
    if condition is false
```

OUTPUT

```
Enter year : 1984
1984 is leap year
```

```
Enter year : 2021
2021 is not leap year
```

2. Python Program to Find the Largest Among Three Numbers

```
Num1 = int(input("Enter number 1 : ")) #Enter Number 1
Num2 = int(input("Enter number 2 : ")) #Enter Number 2
Num3 = int(input("Enter number 3 : ")) #Enter Number 3

if (Num1>Num2) and (Num1>Num3): #Checks if number 1 is
greater than other 2.
    print(f"{Num1} is greater than {Num2} and {Num3}") #Print
this statement if Number 1 is greater.

elif (Num2>Num1) and (Num2>Num3): #Checks if number 2 is
greater than other 2.
    print(f"{Num2} is greater than {Num1} and {Num3}") #Print
this statement if Number 2 is greater.

else:
    print(f"{Num3} is greater than {Num1} and {Num2}") #Print
this statement if Number 3 is greater.
```

OUTPUT

```
Enter number 1 : 678
Enter number 2 : 342
Enter number 3 : 857
857 is greater than 678 and 342
```

3. Python Program to Check if a Number is Positive, Negative or 0

```
Num = float(input("Enter a number : ")) #Enter a number

if (Num > 0): #checks if number is greater than zero
    print("The given number is positive.") #print this
statement

elif (Num < 0): #checks if number is less than zero
    print("The given number is negative.") #print this
statement

else: #checks if number equal to zero
    print("The given number is equal to 0.") #print this
statement
```

OUTPUT

```
Enter a number : 286
The given number is positive.
```

```
Enter a number : -6292
The given number is negative.
```

```
Enter a number : 000
The given number is equal to 0.
```

4. A toy vendor supplies three types of toys: Battery Based Toys, Key-based Toys, and Electrical Charging Based Toys. The vendor gives a discount of 10% on orders for battery-based toys if the order is for more than Rs. 1000. On orders of more than Rs. 100 for key-based toys, a discount of 5% is given, and a discount of 10% is given on orders for electrical charging-based toys of value more than Rs. 500. Assume that the numeric codes 1,2 and 3 are used for battery-based toys, key-based toys, and electrical charging-based toys respectively. Write a program that reads the product code and the order amount and prints out the net amount that the customer is required to pay after the discount.

```
print("1. Battery based toys.")
print("2. Key based toys.")
print("3. Electrical charging based toys.",end="\n\n")

Code = int(input("Enter the code number: ")) #Enter product
code
if (Code not in [1,2,3]):
    print("Code is not valid.Please enter valid code.")
else:
    Amount = float(input("Enter the amount : ")) #Enter
amount

discount = 0

if Code == 1:
    if Amount > 1000: #Checks amount greater 1000
        discount = 10 #Sets discount to 10
elif Code == 2:
    if Amount > 100: #Checks amount greater 100
        discount = 5 #Sets discount to 5
else:
    if Amount > 500: #Checks amount greater 500
        discount = 10 #Sets discount to 10

discount_amount = (discount / 100) * Amount
#Calculates the discount amount
net_amount = Amount - discount_amount #Calculates the net
amount
```

```
print(f"\nThe given product code: {Code}")
print(f"The entered Amount is : Rs. {Amount:.2f}")
print(f"Discount is bases on amount: {discount}%")
print(f"Net Amount needs to pay is: Rs.{net_amount:.2f}")
```

OUTPUT

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 1
Enter the amount : 200

The given product code: 1
The entered Amount is : Rs. 200.00
Discount is bases on amount: 0%
Net Amount needs to pay is: Rs. 200.00

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 1
Enter the amount : 5000

The given product code: 1
The entered Amount is : Rs. 5000.00
Discount is bases on amount: 10%
Net Amount needs to pay is: Rs. 4500.00

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 2
Enter the amount : 50

The given product code: 2
The entered Amount is : Rs. 50.00
Discount is bases on amount: 0%
Net Amount needs to pay is: Rs. 50.00

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 2

Enter the amount : 250

The given product code: 2

The entered Amount is : Rs. 250.00

Discount is bases on amount: 5%

Net Amount needs to pay is: Rs. 237.50

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 3

Enter the amount : 300

The given product code: 3

The entered Amount is : Rs. 300.00

Discount is bases on amount: 0%

Net Amount needs to pay is: Rs. 300.00

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 3

Enter the amount : 750

The given product code: 3

The entered Amount is : Rs. 750.00

Discount is bases on amount: 10%

Net Amount needs to pay is: Rs. 675.00

1. Battery based toys.
2. Key based toys.
3. Electrical charging based toys.

Enter the code number: 4

Code is not valid.Please enter valid code.
