

✓ Simple if statements:

Question 1: Write a Python program that checks if a given number is even. If it is, print "Even number"

✓ If Statement in Python

Checks if a given number is even. If it is, print "Even number"

```
num=int(input("Enter the number:"))  
if num%2==0:  
    print("Even Number")
```

```
Enter the number:1  
Odd Number
```

Question 2: Write a Python program that checks if a given string contains the letter 'a'. If it does, print "String contains 'a'".

```
string="Yashoda Aher"  
i=input("Enter the check string:")  
#i="a"  
if i in string:  
    print("String contains 'a'")
```

```
Enter the check string:b
```

Question 3: Write a Python program that checks if a given year is a leap year. If it is, print "Leap year".

✓ if-else in Python

Program to check the given Year is Leap or not

```
Year=int(input("Enter The Year:"))  
if (Year%4 == 0 and Year%100 != 0)or(Year%400 == 0):  
    print(Year,"is Leap Year")
```

```
Enter The Year:2028
2028 is Leap Year
```

Question 4: Write a Python program that checks if a given number is positive. If it is, print "Positive number".

✓ If else in Python

Check the number is positive and print "Positive number" else "Negative number"

```
num=int(input("Enter the Number:"))
if num>=0:
    print("Positive Number")
```

```
Enter the Number:-12
Negative Number
```

Question 5: Write a Python program that checks if a given character is a vowel. If it is, print "Vowel".

```
char=input("Enter the Character:")
if char.lower() in ("a","i","e","o","u"):
    print("Vowel")
```

```
Enter the Character:i
Vowel
```

Question 6: Write a Python program that checks if a given number is greater than 100. If it is, print "Greater than 100".

✓ If else in Python

Check the number is greater than 100 then print "greater than 100" else "Lower than 100".

```
num=int(input("Enter the Number:"))
if num>100:
    print("Greater than 100")
else:
    print("Lower than 100")
```

```
Enter the Number90
Lower than 100
```

Question 7: Write a Python program that checks if a given string is empty. If it is, print "Empty string".

```
string=input("enter the string:")
i=""
if i in string:
    print("Empty String")
else:
    print("Not Empty")
```

```
enter the string:hjb
Empty String
```

Question 8: Write a Python program that checks if a given number is divisible by both 5 and 7. If it is, print "Divisible by 5 and 7".

```
num=int(input("Enter the Number:"))
if num%5==0 and num%7==0:
    print(num,"is Divisible by 5 and 7")
else:
    print("Not Divisible")
```

```
Enter the Number:2
Not Divisible
```

Question 9: Write a Python program that checks if a given list contains any negative numbers. If it does, print "List contains negative numbers".

```
# l=[1,2,-1,2,4,5,-9,6,7,-10]
# num=l<0
# if num in l:
#     print("Negative number")
```

Question 10: Write a Python program that checks if a given word is a palindrome. If it is, print "Palindrome".

```
word=input("Enter the word:")
if word.lower() == word[::-1]:
    print("The number is palindrome")
```

```
Enter the word:nitin
The number is palindrome
```

✓ if-else statements:

Question 1: Write a Python program that checks if a given number is positive. If it is, print "Positive number"; otherwise, print "Negative number".

```
num=int(input("Enter the Number:"))
if num>=0:
    print("Positive Number")
else:
    print("Negative Number")
```

```
Enter the Number:12
Positive Number
```

Question 2: Write a Python program that checks if a given string is empty. If it is, print "Empty string"; otherwise, print "Non-empty string".

```
string=input("enter the string:")
i=""
if i in string:
    print("Empty String")
```

Question 3: Write a Python program that checks if a given number is even. If it is, print "Even number"; otherwise, print "Odd number".

```
num=int(input("Enter the number:"))
if num%2==0:
    print("Even Number")
else:
    print("Odd Number")
```

Question 4: Write a Python program that checks if a given character is a vowel. If it is, print "Vowel"; otherwise, print "Consonant".

```
char=input("Enter the Character:")
if char.lower() in ("a","i","e","o","u"):
    print("Vowel")
else:
    print("Constant")
```

Enter the Character:n
Constant

Question 5: Write a Python program that checks if a given year is a leap year. If it is, print "Leap year"; otherwise, print "Not a leap year".

```
Year=int(input("Enter The Year:"))
if (Year%4 == 0 and Year%100 != 0)or(Year%400 == 0):
    print(Year,"is Leap Year")
else:
    print(Year,"is Not Leap Year")
```

Enter The Year:2028
2028 is Leap Year

Question 6: Write a Python program that checks if a given number is divisible by 3. If it is, print "Divisible by 3"; otherwise, print "Not divisible by 3".

```
num=int(input("Enter the number:"))
if num%3 == 0:
    print(num," is Divisible by 3")
else:
    print(num," is Not Divisible by 3")
```

Enter the number:2
12 is Divisible by 3

Question 7: Write a Python program that checks if a given string is a palindrome. If it is, print "Palindrome"; otherwise, print "Not a palindrome".

```
word=input("Enter the word:")
if word.lower() == word[::-1]:
    print("Palindrome")
else:
    print("Not palindromr")
```

Question 8: Write a Python program that checks if a given list is empty. If it is, print "Empty list"; otherwise, print "Non-empty list".

```
# i=""
# if i=="":
#     print("Empty String")
# else:
#     print("Non-Empty")
```

```
i = ""

if not i:
    print("Empty String")
else:
    print("Non-Empty")
```

Empty String

Question 9: Write a Python program that checks if a given number is greater than, less than, or equal to 50. Print the corresponding message.

```
num1=int(input("Enter the 1st Number:"))

if num1>50:
    print(num1," is Greater then 50")
elif num1<50:
    print((num1," is less then 50"))
elif num1==50:
    print(num1," is equal to 50")
```

Enter the 1st Number:50
50 is equal to 50

Question 10: Write a Python program that checks if a given character is an uppercase letter. If it is, print "Uppercase"; otherwise, print "Lowercase".

```
char = input("Enter a character: ")

if char.isupper():
    print("Uppercase")
else:
    print("Lowercase")
```

Enter a character: kfldsknf
Lowercase

✓ if-elif-else statements:

Question 1: Write a Python program that checks if a given number is positive, negative, or zero. Print the corresponding message.

```
num1=int(input("Enter the 1st Number:"))

if num1>0:
    print(num1," is Positive")
elif num1<0:
    print((num1," is Negative"))
elif num1==0:
    print(num1," is zero")
```

```
Enter the 1st Number:0
0 is zero
```

Question 2: Write a Python program that compares two numbers and prints the larger number.

```
num1=int(input("Enter the 1st number:"))
num2=int(input("Enter the 2nd Number:"))
if num1>num2:
    print("1st Number is Large")
elif num2>num1:
    print("Secound Number is large")
```

```
Enter the 1st number:15
Enter the 2nd Number:50
Secound Number is large
```

Question 3: Write a Python program that determines whether a given temperature is hot, warm, or cold. Print the corresponding message.

```
temp = float(input("Enter temperature in Celsius: "))

if temp < 20:
    print("Cold")
elif 20 <= temp <= 30:
    print("Warm")
else:
    print("Hot")
```

```
Enter temperature in Celsius: 50
Hot
```

Question 4: Write a Python program that checks if a given year is a leap year, a century year, or neither. Print the corresponding message.

```
Year=int(input("Enter The Year:"))
if (Year%4 == 0 and Year%100 != 0)or(Year%400 == 0):
    print(Year,"is Leap Year")
```

```
elif Year%100 == 0:
    print(Year,"is Century Year")
else:
    print(Year, "is Neither Leap Year nor Century Year")
```

```
Enter The Year:2025
2025 is Neither Leap Year nor Century Year
```

Question 5: Write a Python program that categorizes a given character into uppercase letter, lowercase letter, digit, or special character. Print the corresponding message.

✓ if elif else Condition

Check the given character is uppercase,lowercase,digit or special character

```
char=input("Enter the Character:")
if char.isupper():
    print("Character is UPPER CASE")
elif char.islower():
    print("Character is LOWER CASE")
elif char.isdigit():
    print("Character is Digit")
else:
    print("This is special Character")
```

```
Enter the Character:YASHODA
Character is UPPER CASE
```

Question 6: Write a Python program that calculates the discount percentage based on the purchase amount. Print the corresponding discount percentage.

```
purchase_amount=int(input("Enter the ammount:"))
if purchase_amount >=5000:
    discount = 30
elif purchase_amount ==2000:
    discount = 20
elif purchase_amount == 1000:
    discount = 10
else:
    discount = 5
print("Discount Ammount is:",discount,"%")
```

```
Enter the ammount:500
Discount Ammount is: 5 %
```


Question 7: Write a Python program that checks if a given number is divisible by 2, 3, 5, or none of them. Print the corresponding message.

```
num=int(input("Enter the number:"))
if num%2==0:
    print(num,"is divisible by 2")
elif num%3==0:
    print(num,"is divisible by 3")
elif num%5==0:
    print(num,"is divisible by 5")
```

```
Enter the number:15
15 is divisible by 3
```

Question 8: Write a Python program that determines the grade based on the percentage obtained. Print the corresponding grade.

```
percentage=float(input("Enter the number:"))
if percentage>=90:
    print("A")
elif percentage>75:
    print("B")
elif percentage>60:
    print("C")
elif percentage>40:
    print("D")
else:
    print("Fail")
```

```
Enter the number:12
Fail
```

Question 9: Write a Python program that checks if a given number is within a specific range. Print the corresponding message.

```
# num=int(input("Enter the number:"))
# if num<=80 and num<=100:
#     print("Range is 80 to 100")
# elif num<=80 and num<=60:
#     print("Range is 60 to 80")
# elif num<=60 and num<=40:
#     print("Range is 40 to 60")
# elif num<=10 and num<=20:
#     print("Range is 20 to 10")
# else:
#     print("Below 10")
```

```
num = int(input("Enter a number: "))

if 10 <= num <= 50:
    print("The number is within the range (10 to 50).")
else:
    print("The number is outside the range.")
```

```
Enter a number: 50
The number is within the range (10 to 50).
```

Question 10: Write a Python program that checks if a given string is an English word, a number, or a combination of both. Print the corresponding message.

```
string=(input("Enter the String:"))
if string.islower():
    print("This is English word")
elif string.isupper():
    print("This is English word")
elif string.isdigit():
    print("This is Number")
else:
    print("This is Combination of both")
```

```
Enter the String:HYRTGFter121563
This is Combination of both
```

- ✓ Nested-if-else statements:
- ✓ Question 1: Checking Number Properties

Write a Python program that takes an integer as input and checks the following conditions using nested if:

- If the number is positive, check if it is even or odd.
- If it is even, check if it is greater than 50.
- If it is odd, check if it is a multiple of 5.
- If the number is negative, print "Number is negative."

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