if-else examples

1. WAP to check given number is positive, negative, or zero.

```
num = float(input("Enter a number: "))
if num > 0:
    print("The number is positive.")
elif num < 0:

    print("The number is negative.")
else:
    print("The number is zero.")
```

2. WAP to check grater no amoungs these three numbers.

```
x=int(input("Enter first no."))
y=int(input("Enter second no."))
z=int(input("Enter third no."))
if x>y:
    if x>z:
        print("Greater ni is(x): ",x)
    else:
        print("Greater no is(z): ",z)
else:
    if y>z:
        print("Greater ni is(y): ",y)
    else:
        print("Greater no is(z): ",z)


# O/P:--
Enter first no.10
Enter second no.10
Enter third no.20
Greater no is(z):  20
```

3. WAP to check a person is eligible to vote or not.

```
age = int(input("Enter your age: "))
if age >= 18:
    print("You are eligible to vote.")
else:
    print("You are not eligible to vote.")
```

```
# O/P:-
Enter your age: 35
You are eligible to vote.
```

4. WAP to check given year is a leap year or not.

```
year = int(input("Enter a year: "))
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print("It's a leap year.")
else:
    print("It's not a leap year.")

# O/P:-
Enter a year: 2000
It's a leap year.
```

5. WAP to check your gread based on your own score.

```
score = int(input("Enter your score: "))

if score >= 90:
    print("You got an A.")
else:
    if score >= 80:
        print("You got a B.")
    else:
        if score >= 70:
            print("You got a C.")
        else:
            if score >= 60:
                print("You got a D.")
            else:
                print("You got an F.")

# O/P:-
Enter your score: 90
You got an A.
```

6. WAP to choose value within range of o to 4.

```
print("Please enter the values from 0 to 4")
x=int(input("Enter a number: "))
if x==0:
       print("You entered:", x)
elif x==1:
```

```
      print("You entered:", x)
elif x==2:
      print("You entered:", x)
elif x==3:
      print("You entered:", x)
elif x==4:
      print("You entered:", x)
else:
      print("Beyond the range than specified")

# O/P:-
Enter a number: 5
Beyond the range than specified
PS E:\DataSciencePythonBatch> python control.py
Please enter the values from 0 to 4
Enter a number: 4
You entered: 4
```

7. WAP to calculate the square root of given number.

```
num = float(input('Enter a number: '))
num_sqrt = num ** 0.5
print('The square root of Num :', num_sqrt)

# O/P:-
Enter a number: 4
The square root of 4.000 is 2.000
PS E:\DataSciencePythonBatch> python control.py
Enter a number: 8
The square root of 8.000 is 2.828
```

8. WAP to find the area of triangle.

```
# s = (a+b+c)/2
# area = √(s(s-a)*(s-b)*(s-c))
a = float(input('Enter first side: '))
b = float(input('Enter second side: '))
c = float(input('Enter third side: '))
s = (a + b + c) / 2
area = (s*(s-a)*(s-b)*(s-c)) ** 0.5
print('The area of the triangle is :', area)

# O/P:---
Enter first side: 5
Enter second side: 6
```

```
Enter third side: 7
The area of the triangle is : 14.696938456699069
```

9. Python program to swap two variables.

```
x = input('Enter value of x: ')
y = input('Enter value of y: ')

## create a temporary variable and swap the values
temp = x
x = y
y = temp
print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))

# O/P:---
Enter value of x: 5
Enter value of y: 8
The value of x after swapping: 8
The value of y after swapping: 5


## without using third variable
x = input('Enter value of x: ')
y = input('Enter value of y: ')
x, y = y, x
print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))

#O/P:---
Enter value of x: 4
Enter value of y: 6
The value of x after swapping: 6
The value of y after swapping: 4

## By-using Addition and Subtraction.
x = int(input('Enter value of x: '))
y = int(input('Enter value of y: '))
x = x + y
y = x - y
x = x - y
print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))
```

```
O/P:---
Enter value of x: 4
Enter value of y: 6
The value of x after swapping: 6
The value of y after swapping: 4

## By-using Multiplication and division.
x = int(input('Enter value of x: '))
y = int(input('Enter value of y: '))
x = x * y
y = x / y
x = x / y
print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))

# O/P:---
Enter value of x: 2
Enter value of y: 5
The value of x after swapping: 5.0
The value of y after swapping: 2.0
```

10. WAP to check given no is prime or not.

```
num = int(input("Enter any number: "))
factor = 0
if num == 0 or num == 1:
    print(num, "is not a prime number")
elif num > 1:
    for i in range(2, num):
        if (num % i) == 0:
            factor+=1
            break
if factor==0:
    print(num, "is not a prime number")
else:
    print(num, "is a prime number")
```

11. WAP to take marks value from user and show their total marks, percentage and division.

```
h = float(input("Enter hindi marks:"))
e = float(input("Enter english marks:"))
m = float(input("Enter math marks:"))
s = float(input("Enter science marks:"))
if h>=0 and h<=100 and e>=0 and e<=100 and m>=0 and m<=100 and s>=0 and s<=100:
```

```
    total_marks = h+e+m+s
    print("Total marks =",total_marks)
    if h>34 and e>34 and m>34 and s>34:
        percentage = (total_marks/400)*100
        print("Percentage =",percentage,'%')
        if percentage>=75:
            print("First division with honours....")
        elif percentage>=60 and percentage<75:
            print("First division......")
        elif percentage>=45 and percentage<60:
            print("Second division......")
        elif percentage>=35 and percentage<45:
            print("Third division......")
        else:
            print("Fail.............")
    else:
        print("Fail.............")
else:
    print("Enter valid marks......")
```

12. Minimum Balance Penalty Example

```
balance = float(input("Enter your account balance: "))
if balance >= 10000:
    print("No penalty. You meet the minimum balance requirement.")
elif balance >= 5000:
    print("Warning: Maintain at least ₹10,000 to avoid penalties.")
else:
    print("200/- penalty imposed for low balance.")
```

13. WAP to take uase role and provide role based dashboard.

```
role = input("Enter role (admin/customer/employee): ").lower()
if role == "admin":
    print("Redirecting to admin dashboard.")
elif role == "customer":
    print("Redirecting to customer portal.")
elif role == "employee":
    print("Redirecting to employee panel.")
else:
    print("Unknown role. Access denied.")
```

14. WAP to take loan_type from user and according to loan_type show their interest Rate.

```
loan_type = input("Enter loan type (home/car/personal): ").upper()
if loan_type == "HOME":
    print("Interest rate is 8.0%")
elif loan_type == "CAR":
    print("Interest rate is 10.0%")
elif loan_type == "PERSONAL":
    print("Interest rate is 13.5%")
else:
    print("Invalid loan type.")
```

15. WAP to check bank account type.

```
account_type = input("Enter account type (savings/current/fixed): ").lower()
if account_type == "savings":
    print("You selected a Savings Account.")
elif account_type == "current":
    print("You selected a Current Account.")
elif account_type == "fixed":
    print("You selected a Fixed Deposit Account.")
else:
    print("Invalid account type.")
```

16. WAP for ATM withdrawal system.

```
balance = 5000
withdraw_amount = int(input("Enter amount to withdraw: "))
if withdraw_amount <= 0:
    print("Invalid amount.")
elif withdraw_amount > balance:
    print("Insufficient balance.")
else:
    balance -= withdraw_amount
    print(f"Withdrawal successful. New balance: ₹{balance}")
```

17. WAP banking loan eligibility system.

```
credit_score = int(input("Enter your credit score: "))
income = float(input("Enter your monthly income: "))
if credit_score >= 750 and income >= 30000:
    print("Eligible for premium loan.")
elif credit_score >= 650 and income >= 20000:
    print("Eligible for standard loan.")
elif credit_score >= 550:
    print("Eligible f or basic loan with high interest.")
```

```
else:
    print("Not eligible for a loan.")
```

18. Dynamic Interest Rate Calculator.

```
balance = float(input("Enter your current balance: "))
account_age = int(input("Enter account age in years: "))
if balance >= 100000 and account_age > 5:
    interest_rate = 7.0
elif balance >= 50000:
    interest_rate = 5.5
elif balance >= 10000:
    interest_rate = 4.0
else:
    interest_rate = 2.5
print(f"Applicable interest rate: {interest_rate}%")
```

19. WAP to create multi-factor login system.

```
username = input("Enter username: ")
password = input("Enter password: ")
otp = input("Enter OTP: ")
if username == "user123" and password == "pass123":
    if otp == "4321":
        print("Login successful.")
    else:
        print("Invalid OTP.")
else:
    print("Invalid username or password.")
```

20. WAP to calculator tax bracket.

```
income = float(input("Enter your annual income in ₹: "))
if income < 1200000:
    tax_rate = 0
elif 1500000 < income <= 120000:
    tax_rate = 30
elif income >= 1500000:
    tax_rate = 40
else:
    tax_rate = 50

print(f"Your tax rate is {tax_rate}%")
```

21. WAP to calculate banking transaction fee based on account type.

```
transaction_type = input("Enter transaction type (NEFT/IMPS/RTGS): ").upper()
amount = float(input("Enter transaction amount: "))

if transaction_type == "NEFT":
    if amount <= 10000:
        fee = 2.50
    else:
        5.00
elif transaction_type == "IMPS":
    if amount <= 10000:
        fee = 5.00
    else:
        10.00
elif transaction_type == "RTGS":
    if amount < 200000:
        fee = 0
    else:
        25.00
else:
    print("Invalid transaction type.")
```