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**You**

give me a list of each simple , tricky ,confusing, questions and practice problem for python using only variables ,data types, if else, nested if else ,ladder if else , operators and user input that enchance my coding skill also categorise the questions as simple , intermediate , edvance

**BLACKBOXAI**

Sure! Below is a categorized list of questions and practice problems in Python that focus on variables, data types, conditional statements (if-else, nested if-else, ladder if-else), operators, and user input. The questions are divided into three categories: Simple, Intermediate, and Advanced.

**Simple Questions**

1. **Question**: What is the output of the following code?

python

VerifyRunCopy code

1x = 5

2y = 10

3print(x + y)

1. **Question**: Write a program that takes a number as input and checks if it is even or odd.
2. **Question**: What will be the output of the following code?

python

VerifyRunCopy code

1a = 10

2b = 20

3if a < b:

4 print("a is less than b")

5else:

6 print("a is greater than or equal to b")

1. **Question**: Write a program that takes a user's age as input and prints whether they are a minor (under 18) or an adult (18 and over).

**Intermediate Questions**

1. **Question**: Write a program that takes a number as input and checks if it is positive, negative, or zero using nested if-else statements.
2. **Question**: What will be the output of the following code?

python

VerifyRunCopy code

1score = 85

2if score >= 90:

3 print("Grade A")

4elif score >= 80:

5 print("Grade B")

6elif score >= 70:

7 print("Grade C")

8else:

9 print("Grade D")

1. **Question**: Write a program that takes three numbers as input and prints the largest of the three using ladder if-else statements.
2. **Question**: Write a program that asks the user for their height in centimeters and checks if they are tall (over 180 cm), average (between 160 cm and 180 cm), or short (under 160 cm).

**Advanced Questions**

1. **Question**: Write a program that takes a year as input and checks if it is a leap year or not using nested if-else statements.
2. **Question**: Write a program that takes a grade percentage as input and prints the corresponding letter grade using ladder if-else statements.
3. **Question**: Write a program that takes two numbers as input and checks if they are both positive, both negative, or one of each using nested if-else statements.
4. **Question**: Write a program that takes a temperature in Celsius as input and converts it to Fahrenheit. Then, check if the temperature is hot (above 30°C), warm (between 20°C and 30°C), or cold (below 20°C) using nested if-else statements.

**Practice Problems**

1. **Simple Practice Problem**: Create a program that asks the user for their favorite number and checks if it is greater than 10 or not.
2. **Intermediate Practice Problem**: Write a program that takes a month number (1-12) as input and prints the corresponding month name using ladder if-else statements.
3. **Advanced Practice Problem**: Create a program that takes a number as input and checks if it is prime or not using nested if-else statements.
4. **Advanced Practice Problem**: Write a program that takes a string input from the user and checks if it is a palindrome (reads the same forwards and backwards) using conditional statements.

These questions and problems should help you enhance your coding skills in Python while focusing on the specified concepts. Happy coding!

**You**

more questions

**BLACKBOXAI**

Sure! Here are additional questions and practice problems categorized into Simple, Intermediate, and Advanced levels, focusing on variables, data types, conditional statements, operators, and user input in Python.

**Simple Questions**

1. **Question**: What is the output of the following code?

python

VerifyRunCopy code

1x = 3

2y = 4

3print(x \* y)

1. **Question**: Write a program that takes a number as input and checks if it is divisible by 5.
2. **Question**: What will be the output of the following code?

python

VerifyRunCopy code

1name = "Alice"

2if name == "Alice":

3 print("Hello, Alice!")

4else:

5 print("Hello, stranger!")

1. **Question**: Write a program that asks the user for a number and prints "Positive" if the number is greater than zero, otherwise prints "Not Positive".

**Intermediate Questions**

1. **Question**: Write a program that takes a temperature in Fahrenheit as input and converts it to Celsius. Then, check if the temperature is freezing (below 0°C), moderate (0°C to 20°C), or hot (above 20°C).
2. **Question**: What will be the output of the following code?

python

VerifyRunCopy code

1num = 15

2if num % 2 == 0:

3 print("Even")

4elif num % 3 == 0:

5 print("Divisible by 3")

6else:

7 print("Odd")

1. **Question**: Write a program that takes a score as input and prints "Pass" if the score is 50 or above, otherwise prints "Fail".
2. **Question**: Write a program that takes a day number (1-7) as input and prints the corresponding day of the week using ladder if-else statements.

**Advanced Questions**

1. **Question**: Write a program that takes a number as input and checks if it is a perfect square using nested if-else statements.
2. **Question**: Write a program that takes a string input from the user and checks if it contains any vowels (a, e, i, o, u) using conditional statements.
3. **Question**: Write a program that takes a year as input and checks if it is a century year (divisible by 100) and if it is a leap year.
4. **Question**: Write a program that takes a number as input and checks if it is a Fibonacci number using conditional statements.

**Additional Practice Problems**

1. **Simple Practice Problem**: Create a program that asks the user for their favorite color and prints a message based on their input (e.g., "Blue is calming!").
2. **Intermediate Practice Problem**: Write a program that takes a number as input and prints whether it is a prime number or not using a simple algorithm.
3. **Advanced Practice Problem**: Create a program that takes a string input from the user and counts the number of uppercase and lowercase letters using conditional statements.
4. **Advanced Practice Problem**: Write a program that takes a number as input and checks if it is an Armstrong number (a number that is equal to the sum of its own digits raised to the power of the number of digits).

These additional questions and practice problems should provide you with more opportunities to enhance your coding skills in Python. Enjoy coding!

**You**

at least 2 questions for each level

**BLACKBOXAI**

Sure! Here are at least two additional questions for each level (Simple, Intermediate, and Advanced) focusing on variables, data types, conditional statements, operators, and user input in Python.

**Simple Questions**

1. **Question**: Write a program that takes a number as input and checks if it is greater than 10 and less than 20.
2. **Question**: What will be the output of the following code?

python

VerifyRunCopy code

1x = "Hello"

2y = "World"

3print(x + " " + y)

**Intermediate Questions**

1. **Question**: Write a program that takes a number as input and checks if it is a multiple of both 3 and 5 using nested if-else statements.
2. **Question**: What will be the output of the following code?

python

VerifyRunCopy code

1age = 20

2if age < 13:

3 print("Child")

4elif age < 20:

5 print("Teenager")

6else:

7 print("Adult")

**Advanced Questions**

1. **Question**: Write a program that takes a string input from the user and checks if it is a pangram (a sentence that contains every letter of the alphabet at least once).
2. **Question**: Write a program that takes a number as input and checks if it is a strong number (a number whose sum of the factorial of its digits is equal to the number itself).

**Summary of Questions**

* **Simple Questions**:
  1. Check if a number is greater than 10 and less than 20.
  2. Output the concatenation of two strings.
* **Intermediate Questions**:
  1. Check if a number is a multiple of both 3 and 5.
  2. Determine the age category based on input.
* **Advanced Questions**:
  1. Check if a string is a pangram.
  2. Check if a number is a strong number.

These questions should provide a good mix of challenges at each level to help you enhance your Python coding skills!

**You**

at least 20 questions for each level

**BLACKBOXAI**

Sure! Here’s a comprehensive list of at least 20 questions for each level (Simple, Intermediate, and Advanced) focusing on variables, data types, conditional statements, operators, and user input in Python.

**Simple Questions**

1. Write a program that takes a number as input and checks if it is even or odd.
2. What is the output of the following code?

python

VerifyRunCopy code

1x = 10

2y = 5

3print(x - y)

1. Write a program that takes a string input and prints its length.
2. What will be the output of the following code?

python

VerifyRunCopy code

1a = 3

2b = 4

3print(a \*\* b)

1. Write a program that asks the user for their name and greets them.
2. What will be the output of the following code?

python

VerifyRunCopy code

1x = 7

2if x > 5:

3 print("Greater than 5")

4else:

5 print("5 or less")

1. Write a program that takes a number as input and checks if it is positive, negative, or zero.
2. What is the output of the following code?

python

VerifyRunCopy code

1x = "Python"

2print(x[0])

1. Write a program that takes two numbers as input and prints their sum.
2. What will be the output of the following code?

python

VerifyRunCopy code

1x = 10

2y = 20

3print(x == y)

1. Write a program that takes a character as input and checks if it is a vowel or consonant.
2. What is the output of the following code?

python

VerifyRunCopy code

1x = 5

2y = 2

3print(x // y)

1. Write a program that takes a number as input and prints "High" if it is greater than 100, otherwise prints "Low".
2. What will be the output of the following code?

python

VerifyRunCopy code

1x = "Hello"

2print(x \* 3)

1. Write a program that takes a temperature in Celsius and converts it to Fahrenheit.
2. What is the output of the following code?

python

VerifyRunCopy code

1x = 10

2if x < 10:

3 print("Less than 10")

4else:

5 print("10 or more")

1. Write a program that takes a number as input and checks if it is divisible by 2.
2. What will be the output of the following code?

python

VerifyRunCopy code

1x = 5

2y = 10

3print(x < y and y > 5)

1. Write a program that takes a string input and prints it in uppercase.
2. What is the output of the following code?

python

VerifyRunCopy code

1x = 15

2if x > 10:

3 print("x is greater than 10")

**Intermediate Questions**

1. Write a program that takes a number as input and checks if it is a prime number.
2. What will be the output of the following code?

python

VerifyRunCopy code

1score = 75

2if score >= 90:

3 print("A")

4elif score >= 80:

5 print("B")

6elif score >= 70:

7 print("C")

8else:

9 print("D")

1. Write a program that takes three numbers as input and prints the largest of the three.
2. Write a program that takes a month number (1-12) as input and prints the corresponding month name.
3. What will be the output of the following code?

python

VerifyRunCopy code

1age = 18

2if age < 18:

3 print("Minor")

4elif age == 18:

5 print("Just turned adult")

6else:

7 print("Adult")

1. Write a program that takes a number as input and checks if it is a perfect square.
2. Write a program that takes a string input and checks if it is a palindrome.
3. What will be the output of the following code?

python

VerifyRunCopy code

1x = 10

2if x > 5:

3 print("Greater")

4elif x == 5:

5 print("Equal")

6else:

7 print("Lesser")

1. Write a program that takes a score as input and prints "Pass" if the score is 50 or above, otherwise prints "Fail".
2. Write a program that takes a number as input and checks if it is a Fibonacci number.
3. What will be the output of the following code?

python

VerifyRunCopy code

1x = 10

2if x % 2 == 0:

3 print("Even")

4else:

5 print("Odd")

1. Write a program that takes a temperature in Fahrenheit and checks if it is

**You**

give me a list of each simple , tricky ,confusing, questions and practice problem for python using only variables ,data types, if else, nested if else ,ladder if else , operators and user input that enchance my coding skill also categorise the questions as edvance leve at least 30 question

**BLACKBOXAI**

Certainly! Below is a comprehensive list of advanced-level questions and practice problems in Python, categorized into Simple, Tricky, and Confusing questions. These questions focus on variables, data types, conditional statements (if-else, nested if-else, ladder if-else), operators, and user input.

**Advanced Questions**

**Simple Questions**

1. **Question**: Write a program that takes a number as input and checks if it is positive, negative, or zero using nested if-else statements.
2. **Question**: Write a program that takes a year as input and checks if it is a leap year.
3. **Question**: Write a program that takes a string input and checks if it contains only digits.
4. **Question**: Write a program that takes two numbers as input and prints their product.
5. **Question**: Write a program that takes a character as input and checks if it is an uppercase letter.
6. **Question**: Write a program that takes a number as input and checks if it is a multiple of 10.
7. **Question**: Write a program that takes a string input and prints it in reverse.
8. **Question**: Write a program that takes a number as input and checks if it is a prime number.
9. **Question**: Write a program that takes a temperature in Celsius and converts it to Fahrenheit.
10. **Question**: Write a program that takes a number as input and checks if it is a perfect square.

**Tricky Questions**

1. **Question**: Write a program that takes a number as input and checks if it is an Armstrong number (a number that is equal to the sum of its own digits raised to the power of the number of digits).
2. **Question**: Write a program that takes a string input and checks if it is a palindrome (reads the same forwards and backwards).
3. **Question**: Write a program that takes a number as input and checks if it is a Fibonacci number.
4. **Question**: Write a program that takes a score as input and prints the corresponding letter grade using ladder if-else statements.
5. **Question**: Write a program that takes a string input and counts the number of vowels and consonants.
6. **Question**: Write a program that takes a number as input and checks if it is a strong number (a number whose sum of the factorial of its digits is equal to the number itself).
7. **Question**: Write a program that takes a string input and checks if it is a pangram (contains every letter of the alphabet at least once).
8. **Question**: Write a program that takes a number as input and checks if it is a perfect number (a number that is equal to the sum of its proper divisors).
9. **Question**: Write a program that takes a date as input (in the format DD/MM/YYYY) and checks if it is a valid date.
10. **Question**: Write a program that takes a number as input and checks if it is a happy number (a number that eventually reaches 1 when replaced by the sum of the square of each digit).

**Confusing Questions**

1. **Question**: Write a program that takes a number as input and checks if it is a prime number using a nested if-else statement.
2. **Question**: Write a program that takes a string input and checks if it is an anagram of another string.
3. **Question**: Write a program that takes a number as input and checks if it is a palindrome number (reads the same forwards and backwards).
4. **Question**: Write a program that takes a string input and checks if it contains any special characters.
5. **Question**: Write a program that takes a number as input and checks if it is a triangular number (a number that can form an equilateral triangle).
6. **Question**: Write a program that takes a string input and checks if it is a valid identifier in Python.
7. **Question**: Write a program that takes a number as input and checks if it is a narcissistic number (a number that is equal to the sum of its own digits raised to the power of the number of digits).
8. **Question**: Write a program that takes a string input and checks if it is a valid email address.
9. **Question**: Write a program that takes a number as input and checks if it is a composite number (a positive integer that has at least one positive divisor other than one or itself).
10. **Question**: Write a program that takes a string input and checks if it is a valid URL.

**Summary**

* **Simple Questions**: 10 questions focusing on basic checks and conversions.
* **Tricky Questions**: 10 questions that involve more complex logic and mathematical properties.
* **Confusing Questions**: 10 questions that require careful consideration of conditions and validations.

These questions should provide a solid challenge