PW SKILLS

Python Milestone exam

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Milestone Python Test

1. How does the input() function work in Python? Provide an example.

2. Describe the difference between mutable and immutable data types in Python.

3. Discuss the difference between the == and is operators in Python.

4. Describe the difference between the if, elif, and else statements in Python.

5. What is the purpose of the break and continue statements in loops?

6. Define a function in Python and explain its components.

7. Explain the concept of inheritance in Python with an example.

8. Explain the purpose of the self keyword in Python classes.

9. What are exceptions in Python and how are they handled?

10. Explain the purpose of try, except, else, and finally blocks in exception handling.

11. Write a Python program to take user input for their name and age, and then print a greeting message.

12. Write a Python program to swap the values of two variables without using a third variable.

13. Write a Python program to calculate the area of a circle given its radius.

14. Write a Python program that takes a number as input and prints whether it is positive, negative, or zero.

15. Write a Python program to print all the prime numbers between 1 and 100.

16. Write a Python program to find the factorial of a given number using a loop.

17. Write a Python function that takes two numbers as arguments and returns their sum.

18. Define a Python class Rectangle with attributes length and width. Write methods to calculate its area and perimeter.

19. Define a Python class Car with a class variable num_of_cars that keeps track of the number of cars created. Write a method to display the total number of cars.

20. Write a Python program that takes two numbers as input and performs division. Handle the ZeroDivisionError exception if the second number is zero.