

PYTHON

Assignment

1. Write a Python script that utilizes the `len()`, `max()`, `min()`, and `sum()` functions on a list of integers. Explain what each function does.
2. Define a function named `greet()` that takes a string as an argument and prints a greeting message using that string. Call this function with different names.
3. Create a function named `square()` that takes an integer as an argument, calculates its square, and returns the result. Print the returned value.
4. Write a function `describe_pet()` that takes two arguments: the name of a pet and its type. Set the default type to 'dog'. Test this function by passing different arguments.
5. Create a function `build_profile()` that takes in first and last names as well as an arbitrary number of keyword arguments (`**kwargs`). Return a dictionary representing the user's profile.
6. Write a function `sum_all()` that takes any number of numerical arguments and returns their sum. Test it with different numbers of arguments.
7. Define a function `modify_list()` that takes a list and appends a new element to it. Call this function and print the list before and after the modification.

8. Write a function `calculate()` that takes two numbers and returns their sum, difference, and product. Call this function and print the results.
9. Create a function `order_pizza()` that takes arguments for crust type, size, and a list of toppings. Ensure that the crust type and size are passed as positional arguments and toppings as a keyword argument.
10. Write a function `describe_person()` that takes two arguments: name and age, where age has a default value of `None`. If age is provided, print the name and age; otherwise, print only the name.