Technical Interview

Feel free to use whichever programming language is most convenient for you: Java, Javascript, or Python, to complete your task.

1. Create a two-string variable, concatenate the two variables and print out the result.

2. Create a function that calculates the power of a number. Then write a unit test to check the correctness of the function.

3. Using the OOP feature Inheritance, create a class Animal with the method sound() and then create a Cat and Dog class that inherits from the Animal class. The Cat and Dog class should override the sound class and print a different sound.

4. Writing a **well-documented** code creates a function that calculates simple interest.

5. Write a Python program that checks if a string is a palindrome; optionally, write a unit test to check your program's correctness.

6. Write a function that removes repeated characters from a string. Sample strings are:
   a. Hello: output should be Hello
   b. Concatenate: output should be Conaten

7. Create a program that prints out the odd numbers in an array. Sample array:
   a. [1, 2, 3, 4, 5, 6]
   b. [34, 2, 9, 91, 19, 401, 0]

8. Create a program that prints out the even numbers in an array. Sample array:
   a. [1, 2, 3, 4, 5, 6]
   b. [34, 2, 9, 91, 19, 401, 0]

9. Create a function that converts any string value to **upper case**. Then write a unit test that checks the function's correctness.

10. Create a function that converts any string value to a **sentence case**, then write a unit test that checks the function's correctness.

Goodluck!