Assignment 4

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Replit: main.py - Assignment 4 - Replit

Python's pow function returns the result of raising a number to a given power. Define a function expo that performs this task and state its computational complexity using big-O notation. The first argument of this function is the number, and the second argument is the exponent (nonnegative numbers only). You may use either a loop or a recursive function in your implementation.

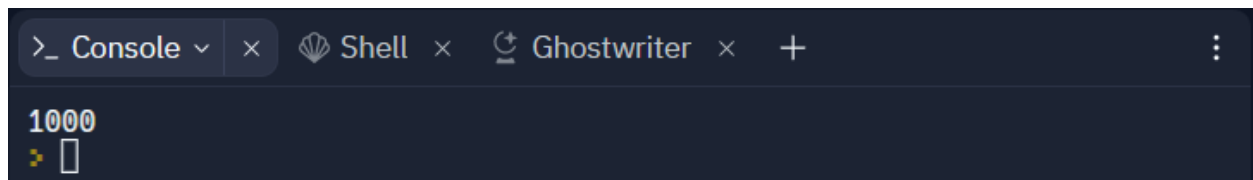**Caution:** do not use Python's ** operator or pow function in this exercise, automatic 0.

1. Expo function (5%).
2. Big-O Analysis (5%).

Python Code

```python
#Expo Function
def expo(number, exponential):
    result = 1
    for i in range(exponential):
        result *= number
    return result


#Big-O Analysis Example
result = expo(10, 3) # Compute 10 raised to the power of 3
print(result) # Output: 1000
```

As a result of running the code in Replit, we get the following result: