

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.

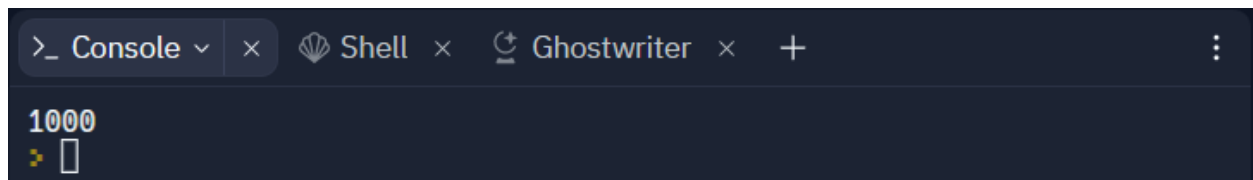
1. Expo function (5%).
2. Big-O Analysis (5%).

Python Code

```
#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:

A screenshot of a Replit interface. At the top, there are tabs for 'Console', 'Shell', and 'Ghostwriter'. The 'Console' tab is active, showing the output '1000' in a large font. Below the output, there is a prompt character '>' followed by a cursor icon.