

## Day17- Practice Exercise Questions (3 Questions)

### 1. Recursive Sum of Digits

Write a recursive function `sum_of_digits(n)` that calculates the sum of digits of a given positive integer `n`.

**Example:**

```
print(sum_of_digits(1234)) # Output: 10 (1+2+3+4)
```

```
print(sum_of_digits(987)) # Output: 24 (9+8+7)
```

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### 2. Recursive Reverse of a String

Write a recursive function `reverse_string(s)` that takes a string `s` and returns the **reversed version** of it using recursion.

**Example:**

```
print(reverse_string("hello")) # Output: "olleh"
```

```
print(reverse_string("python")) # Output: "nohtyp"
```

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### 3. Recursive Tower of Hanoi Solution

Write a recursive function `tower_of_hanoi(n, source, auxiliary, target)` to solve the **Tower of Hanoi** problem for `n` disks. Print the steps required to move all disks from the source rod to the target rod.

**Example Output for n = 3:**

Move disk 1 from A to C

Move disk 2 from A to B

Move disk 1 from C to B

Move disk 3 from A to C

Move disk 1 from B to A

Move disk 2 from B to C

Move disk 1 from A to C

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