

Problem 1:

Write a program to find the largest and smallest element in an array.

Input:

```
1 def find_min_max(arr):
2     if not arr:
3         return None, None
4
5     smallest = largest = arr[0]
6     for num in arr:
7         if num < smallest:
8             smallest = num
9         if num > largest:
10            largest = num
11
12    return smallest, largest
13
14 nums = [34, 7, 23, 32, 5, 62]
15 min_val, max_val = find_min_max(nums)
16 print(f"Smallest: {min_val}, Largest: {max_val}")
```

Output:

```
Smallest: 5, Largest: 62
==== Code Execution Successful ===
```

Problem 2:

Write a program to find the factorial of a number using recursion.

Input:

```
1 def factorial(n):
2     if n == 0 or n == 1:
3         return 1
4     return n * factorial(n - 1)
5
6 num = 5
7 print(f"Factorial of {num} is {factorial(num)}")
```

Output:

```
Factorial of 5 is 120
```

Problem 3:

Write a program to find the nth Fibonacci number using recursion.

Input:

```
1 def fibonacci(n):
2     if n <= 0:
3         return 0
4     elif n == 1:
5         return 1
6     return fibonacci(n - 1) + fibonacci(n - 2)
7
8 n = 7
9 print(f"The {n}th Fibonacci number is {fibonacci(n)}")
```

Output:

```
The 7th Fibonacci number is 13
```

```
==== Code Execution Successful ===
```

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