```
import numpy as np
```

User input

```
def get_matrix():
    # Get the order of the matrix
    n = int(input("Enter the order of the matrix (n for an n x n matrix): "))

    matrix = []
    print("Enter the values row by row:")
    for i in range(n):
        row = []
        for j in range(n):
            element = int(input(f"Enter element for row {i+1}, column {j+1}: "))
            row.append(element)
        matrix.append(row)

    # Convert the list of lists to a NumPy array
    np_matrix = np.array(matrix)

    return np_matrix
```

```
def calculate_diagonal_sum(np_matrix):
    # Calculate the sum of the primary diagonal
    primary_diagonal_sum = np.trace(np_matrix)

    # Calculate the sum of the secondary diagonal
    secondary_diagonal_sum = np.trace(np.fliplr(np_matrix))

    return primary_diagonal_sum, secondary_diagonal_sum
```

Matrix Display

```
matrix = get_matrix()
print("The matrix is:")
print(matrix)
```

```
Enter the order of the matrix (n for an n x n matrix): 2
Enter the values row by row:
Enter element for row 1, column 1: 1
Enter element for row 1, column 2: 2
Enter element for row 2, column 1: 3
Enter element for row 2, column 2: 4
The matrix is:
[[1 2]
 [3 4]]
```

diagnol sums

```
primary_sum, secondary_sum = calculate_diagonal_sum(matrix)
print("Primary diagonal sum:", primary_sum)
print("Secondary diagonal sum:", secondary_sum)
```

```
Primary diagonal sum: 5
Secondary diagonal sum: 5
```

```
Start coding or generate with AI.
```