Print the sum of boundary elements of a matrix

CODE:

def sum\_boundary\_elements(matrix):

rows = len(matrix)

cols = len(matrix[0])

if rows < 2 or cols < 2:

print("Matrix is too small. Boundary sum is not applicable.")

return

boundary\_sum = 0

for i in range(rows):

for j in range(cols):

if i == 0 or i == rows - 1 or j == 0 or j == cols - 1:

boundary\_sum += matrix[i][j]

return boundary\_sum

# Get dimensions of the matrix from the user

rows = int(input("Enter the number of rows in the matrix: "))

cols = int(input("Enter the number of columns in the matrix: "))

# Get the matrix from the user

matrix = []

print("Enter the elements of the matrix:")

for i in range(rows):

row = []

for j in range(cols):

element = int(input(f"Enter element at position ({i + 1}, {j + 1}): "))

row.append(element)

matrix.append(row)

# Calculate and display the sum of boundary elements

boundary\_sum = sum\_boundary\_elements(matrix)

if boundary\_sum is not None:

print(f"\nThe sum of boundary elements of the matrix is: {boundary\_sum}")

OUTPUT:

Enter the number of rows in the matrix: 3

Enter the number of columns in the matrix: 3

Enter the elements of the matrix:

Enter element at position (1, 1): 1

Enter element at position (1, 2): 2

Enter element at position (1, 3): 3

Enter element at position (2, 1): 4

Enter element at position (2, 2): 5

Enter element at position (2, 3): 6

Enter element at position (3, 1): 7

Enter element at position (3, 2): 8

Enter element at position (3, 3): 9

The sum of boundary elements of the matrix is: 40

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