



PW Serie No. 6: Indexed Variables – Solution -

1 Dimension Arrays

Exercise 01:

```
# 1. Create the array
numbers = [1, 2, 3, 4, 5, 6, 7]

# 2. Print the array
print("Original array:", numbers)

# 3. Show 4th element (index 3)
print("4th element:", numbers[3])

# 4. Add number 8
numbers.append(8)
print("After append:", numbers)

# 5. Delete 2nd element (index 1)
numbers.pop(1)
print("After pop:", numbers)

# 6. Delete number 5
numbers.remove(5)
print("After remove:", numbers)
```

Exercise 02:

```
main.py +
1 # Create empty array
2 numbers = []
3 # Ask user for 6 numbers
4 for i in range(6):
5     num = int(input("Enter a number "))
6     numbers.append(num)
7 # Show elements one by one
8 print("The elements in the array are:")
9 for i in range(6):
10    print(numbers[i])
11 # Calculate and show sum
12 sum = 0
13 for i in range(6):
14    sum = sum + numbers[i]
15 print("The sum of all elements is:", sum)
```

Exercise 3:

```
main.py +
1 # Define the first array T1
2 T1 = [5, 7, 12, 43, 52, 9, 54, 3]
3
4 # Define the second array T2
5 T2 = [3, 4, 2, 8, 10, 31, 32, 1]
6
7 # Create empty array T3
8 T3 = []
9
10 # Add corresponding elements
11 for i in range(len(T1)):
12     T3.append(T1[i] + T2[i])
13
14 # Print the arrays
15 print("T1:", T1)
16 print("T2:", T2)
17 print("T3:", T3)
```

2 Dimensional Arrays

Exercise 1:

```
main.py +
1 # 1. Create the 2D array (matrix)
2 matrix = [
3     [1, 2, 3],
4     [4, 5, 6],
5     [7, 8, 9]
6 ]
7 # 2. Print the matrix
8 print("Original matrix:")
9 print(matrix)
10
11 # 3. Show element in 2nd row, 1st column (index [1][0])
12 print("\nElement in 2nd row, 1st column:", matrix[1][0])
13
14 # 4. Change element in 2nd row, 2nd column to 10
15 matrix[1][1] = 10
16 print("\nMatrix after changing element:")
17 print(matrix)
18 # 5. Delete 2nd row
19 matrix.pop(1)
20 print("\nMatrix after deleting 2nd row:")
21 print(matrix)
```

Exercise 2:

```
# Create empty 2D array (matrix)
matrix = []

# Get numbers from user and create matrix
for i in range(2): # 2 rows
    row = []
    for j in range(3): # 3 columns
        num = int(input("Enter number: "))
        row.append(num)
    matrix.append(row)

# Show elements one by one
print("\nElements in the matrix:")
for i in range(2):
    for j in range(3):
        print(matrix[i][j])
    print()

# Calculate sum
sum = 0
for i in range(2):
    for j in range(3):
        sum = sum + matrix[i][j]
print("\nSum of all elements:", sum)
```

Exercise 3:

main.py



```
1 # Create the matrix
2 matrix = [
3     [1, 2, 3],
4     [4, 5, 6],
5     [7, 8, 9]
6 ]
7 # Find and show odd numbers
8 print("\nOdd numbers in the matrix:")
9 for i in range(3):
10     for j in range(3):
11         if matrix[i][j] % 2 != 0:
12             print(matrix[i][j])
```