Part 4 – Advance Looping & List

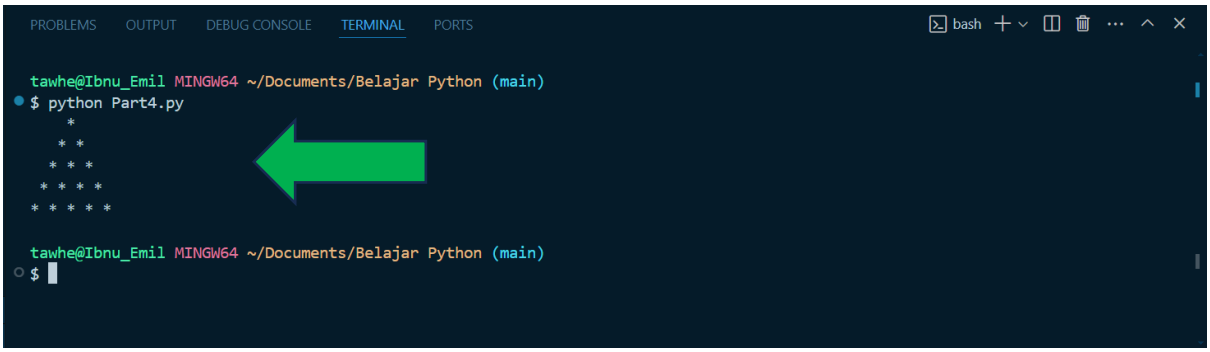
1. Problem 1 – Play with Asterisk

```
def asterisk(n):
    for i in range(1, n + 1):

        for j in range(n - i):
            print(" ", end="")

        for k in range(i):
            if k == i - 1:
                print("*")
            else:
                print("* ", end="")

asterisk(5)
```

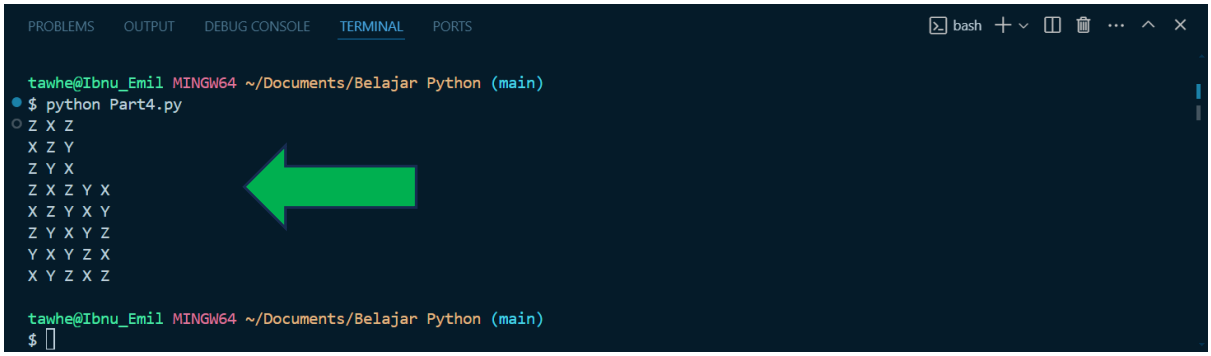


2. Problem 2 – Draw XYZ

```
def draw_xyz(N):
    result = []
    for i in range(1, N + 1):
        row = []
        for j in range(1, N + 1):
            if (i + j) % 3 == 0:
                row.append("X")
            elif (i + j) % 2 != 0:
                row.append("Y")
            else:
                row.append("Z")
        result.append(" ".join(row))

    return "\n".join(result)

print(draw_xyz(3))
print(draw_xyz(5))
```



3. Problem 3 – Cetak Tabel Perkalian

Disini saya menggunakan input 10

```
def cetak_table_perkalian(number):
    for i in range(1, number + 1):
        row = []
        for j in range(1, number + 1):
            row.append(str(i * j))
        print(" ".join(row))

cetak_table_perkalian(10)
```

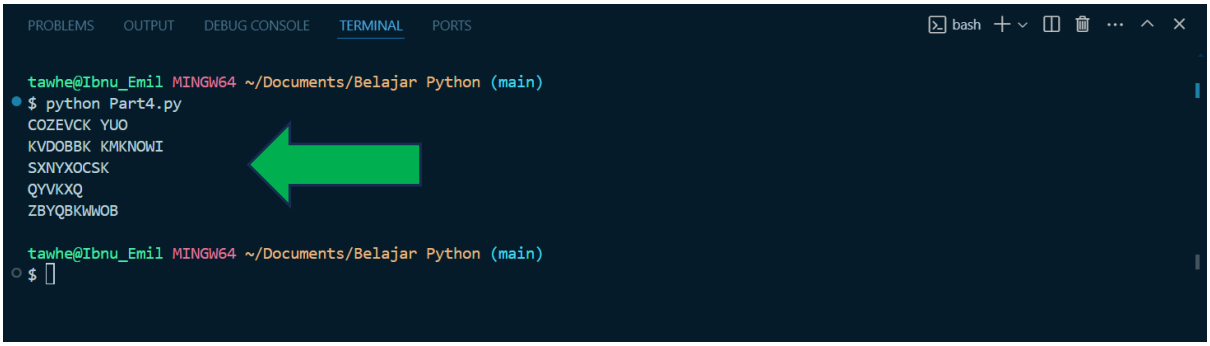
4. Problem 4 – Ubah Huruf

```
def ubah_huruf(sentence):
    shifted_text = []
    for char in sentence:
        if char.isalpha():
            if char.islower():
                shifted_char = chr((ord(char) - ord('a') + 10) % 26 + ord('a'))
            elif char.isupper():
                shifted_char = chr((ord(char) - ord('A') + 10) % 26 + ord('A'))
        else:
            shifted_char = char
        shifted_text.append(shifted_char)

    return ''.join(shifted_text)

print(ubah_huruf("SEPULSA OKE"))
```

```
print(ubah_huruf("ALTERRA ACADEMY"))
print(ubah_huruf("INDONESIA"))
print(ubah_huruf("GOLANG"))
print(ubah_huruf("PROGRAMMER"))
```



5. Problem 5 – Mean dan Median

```
def mean_median(array_input):
    mean = sum(array_input) / len(array_input)
    sorted_array = sorted(array_input)
    n = len(sorted_array)
    if n % 2 == 1:
        median = sorted_array[n // 2]
    else:
        median = (sorted_array[n // 2 - 1] + sorted_array[n // 2]) / 2

    return (mean, median)

print(mean_median([1, 2, 3, 4]))
print(mean_median([1, 2, 3, 4, 5]))
print(mean_median([7, 8, 9, 13, 15]))
print(mean_median([10, 20, 30, 40, 50]))
print(mean_median([15, 20, 30, 60, 120]))
```