

```
# 1.
m = [
    [2, 4, 6],
    [8, 0, 1],
    [3, 5, 7]
]

m1 = []
for row in m:
    m1.append(row[:])

m1.append([10, 11, 12])
print(m1)
m2 = []
for row in m:
    m2.append(row[:])

m2[0].append(13)
m2[1].append(14)
m2[2].append(15)
print(m2)
m3 = []
for row in m:
    m3.append(row[:])

m3.insert(1, [16, 17, 18])
print(m3)
m4 = []
for row in m:
    m4.append(row[:])

m4[0].insert(2, 19)
m4[1].insert(2, 20)
m4[2].insert(2, 21)
print(m4)
print("=" * 60)

# 2.
m = [
    [1, 2, 3, 4],
    [5, 6, 7, 8],
    [9, 10, 11, 12],
    [13, 14, 15, 16]
]

print(m[1])
```

```
print(m[1])
c = [row[2] for row in m]
print(c)
print(m[2], m[3])
c1 = [row[:2] for row in m]
print(c1)
print(m[2][1:4], m[3][1:4])
print(m[1][0], m[1][3], m[3][0], m[3][3])
d = [m[i][i] for i in range(4)]
print(d)
rev = [m[i][3 - i] for i in range(4)]
print(rev)
print("=" * 60)
```

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# 3.
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```
m = [
    [1, 1, 1],
    [1, 1, 1],
    [1, 1, 1]
]

for row in m:
    row.append(0)
print(m)
for row in m:
    row.append(5)
print(m)
m.append([1, 2, 3, 4, 5])
print(m)
m.insert(1, [6, 7, 8, 9, 10])
print(m)
c = [10, 20, 30, 40, 50]
for i in range(len(m)):
    m[i].append(c[i])
print(m)
print("=" * 60)

# 4.
m = [
    [1, 2, 3, 4, 5],
    [6, 7, 8, 9, 10],
    [11, 12, 13, 14, 15],
    [16, 17, 18, 19, 20],
    [21, 22, 23, 24, 25]
]
```

```

print(m[0], m[2], m[4])
print(m[1][1:3], m[3][1:3])
d = [m[i][i] for i in range(len(m))]
print(d)
rev = [m[i][3 - i] for i in range(4)]
print(rev)
print("=" * 60)

# 5.
m = [
    [10, 20, 30],
    [40, 50, 60],
    [70, 80, 90]
]

m[1][2] = 6
print(m)
print(m[0], m[1])
print(m[1][1:], m[2][1:])
print([m[i][i] for i in range(3)])
rev = [m[i][2 - i] for i in range(len(m))]
print(rev)
print(m[0][1], m[1][1], m[2][1])

```

```

===== RESTART: C:/Users/krsb/OneDrive/Desktop/internship/DAY 4 TASK.py =====
[[2, 4, 6], [8, 0, 1], [3, 5, 7], [10, 11, 12]]
[[2, 4, 6, 13], [8, 0, 1, 14], [3, 5, 7, 15]]
[[2, 4, 6], [16, 17, 18], [8, 0, 1], [3, 5, 7]]
[[2, 4, 19, 6], [8, 0, 20, 1], [3, 5, 21, 7]]
=====
[5, 6, 7, 8]
[3, 7, 11, 15]
[9, 10, 11, 12] [13, 14, 15, 16]
[[1, 2], [5, 6], [9, 10], [13, 14]]
[10, 11, 12] [14, 15, 16]
5 8 13 16
[1, 6, 11, 16]
[4, 7, 10, 13]
=====
[[1, 1, 1, 0], [1, 1, 1, 0], [1, 1, 1, 0]]
[[1, 1, 1, 0, 5], [1, 1, 1, 0, 5], [1, 1, 1, 0, 5]]
[[1, 1, 1, 0, 5], [1, 1, 1, 0, 5], [1, 1, 1, 0, 5], [1, 2, 3, 4, 5]]
[[1, 1, 1, 0, 5], [6, 7, 8, 9, 10], [1, 1, 1, 0, 5], [1, 1, 1, 0, 5], [1, 2, 3, 4, 5]]
[[1, 1, 1, 0, 5, 10], [6, 7, 8, 9, 10, 20], [1, 1, 1, 0, 5, 30], [1, 1, 1, 0, 5, 40], [1, 2, 3, 4, 5, 50]]
=====
[1, 2, 3, 4, 5] [11, 12, 13, 14, 15] [21, 22, 23, 24, 25]
[7, 8] [17, 18]
[1, 7, 13, 19, 25]
[4, 8, 12, 16]
=====
[[10, 20, 30], [40, 50, 6], [70, 80, 90]]
[10, 20, 30] [40, 50, 6]
[50, 6] [80, 90]
[10, 50, 90]
[30, 50, 70]
20 50 80
>>>

```