

QUIZ 1

COMP9021 PRINCIPLES OF PROGRAMMING

```
$ python3 quiz_1.py
Enter two integers: 0 4
```

The generated mapping is:
{2: 3, 4: 1}

The keys are, from smallest to largest:
[2, 4]

Properly ordered, the cycles given by the mapping are:
[]

The (triply ordered) reversed dictionary per lengths is:
{1: {1: [4], 3: [2]}}

```
$ python3 quiz_1.py
Enter two integers: 0 6
```

The generated mapping is:
{1: 1, 3: 3, 5: 6, 6: 6}

The keys are, from smallest to largest:
[1, 3, 5, 6]

Properly ordered, the cycles given by the mapping are:
[[1], [3], [6]]

The (triply ordered) reversed dictionary per lengths is:
{1: {1: [1], 3: [3]}, 2: {6: [5, 6]}}

```
$ python3 quiz_1.py
Enter two integers: 0 11
```

The generated mapping is:
{2: 7, 3: 11, 4: 10, 5: 10, 7: 2, 9: 5, 10: 10, 11: 5}

The keys are, from smallest to largest:
[2, 3, 4, 5, 7, 9, 10, 11]

Properly ordered, the cycles given by the mapping are:
[[2, 7], [10]]

The (triply ordered) reversed dictionary per lengths is:
{1: {2: [7], 7: [2], 11: [3]}, 2: {5: [9, 11]}, 3: {10: [4, 5, 10]}}

```
$ python3 quiz_1.py
```

```
Enter two integers: 10 9
```

The generated mapping is:

```
{1: 5, 2: 6, 3: 5, 4: 5, 5: 6, 6: 7, 7: 1, 9: 6}
```

The keys are, from smallest to largest:

```
[1, 2, 3, 4, 5, 6, 7, 9]
```

Properly ordered, the cycles given by the mapping are:

```
[[1, 5, 6, 7]]
```

The (triply ordered) reversed dictionary per lengths is:

```
{1: {1: [7], 7: [6]}, 3: {5: [1, 3, 4], 6: [2, 5, 9]}}
```

```
$ python3 quiz_1.py
```

```
Enter two integers: 20 11
```

The generated mapping is:

```
{2: 4, 3: 9, 4: 4, 5: 8, 6: 2, 7: 5, 8: 11, 9: 1, 10: 10, 11: 5}
```

The keys are, from smallest to largest:

```
[2, 3, 4, 5, 6, 7, 8, 9, 10, 11]
```

Properly ordered, the cycles given by the mapping are:

```
[[4], [5, 8, 11], [10]]
```

The (triply ordered) reversed dictionary per lengths is:

```
{1: {1: [9], 2: [6], 8: [5], 9: [3], 10: [10], 11: [8]},  
 2: {4: [2, 4], 5: [7, 11]}}
```

```
$ python3 quiz_1.py
```

```
Enter two integers: 50 15
```

The generated mapping is:

```
{1: 5, 2: 14, 3: 15, 4: 3, 5: 5, 6: 5, 7: 15, 8: 6, 9: 10, 10: 15, 11: 12,  
                                     12: 15, 13: 14, 14: 8, 15: 9}
```

The keys are, from smallest to largest:

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]
```

Properly ordered, the cycles given by the mapping are:

```
[[5], [9, 10, 15]]
```

The (triply ordered) reversed dictionary per lengths is:

```
{1: {3: [4], 6: [8], 8: [14], 9: [15], 10: [9], 12: [11]},  
 2: {14: [2, 13]},  
 3: {5: [1, 5, 6]},  
 4: {15: [3, 7, 10, 12]}}
```