

## QUIZ 4

### COMP9021 PRINCIPLES OF PROGRAMMING

Reading the number written in base 8 from right to left, keeping the leading 0's, if any:

- 0: Move North
- 1: Move North-East
- 2: Move East
- 3: Move South-East
- 4: Move South
- 5: Move South West
- 6: Move West
- 7: Move North-West

We start from a position that is the unique position where the switch is on.

Moving to a position switches on to off, off to on there.

We display a rectangle of minimal size that contains all points that are eventually switched on.

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 0
```

```
Keeping leading 0's, if any, in base 8, 0 reads as 0.
```

```
o
```

```
o
```

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 00
```

```
Keeping leading 0's, if any, in base 8, 00 reads as 00.
```

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o
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o
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o
```

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 0256
```

```
Keeping leading 0's, if any, in base 8, 0256 reads as 0400.
```

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o
```

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 032
```

```
Keeping leading 0's, if any, in base 8, 032 reads as 040.
```

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 3654
```

```
Keeping leading 0's, if any, in base 8, 3654 reads as 7106.
```

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o ●
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● o
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o ●
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o o
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```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 100738324
```

```
Keeping leading 0's, if any, in base 8, 100738324 reads as 600222424.
```

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●○○○○
```

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 73776
```

```
Keeping leading 0's, if any, in base 8, 73776 reads as 220060.
```

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```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 7704322
```

```
Keeping leading 0's, if any, in base 8, 7704322 reads as 35307402.
```

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```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 206537612
```

```
Keeping leading 0's, if any, in base 8, 206537612 reads as 1423701614.
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●○○●
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```

```
$ python3 quiz_4.py
```

```
Enter a non-strictly negative integer: 000123456789
```

```
Keeping leading 0's, if any, in base 8, 000123456789 reads as 000726746425.
```

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