Advanced Numbers

In this lecture we will learn about a few more representations of numbers in Python.

Hexadecimal

Using the function hex() you can convert numbers into a hexadecimal (https://en.wikipedia.org/wiki/Hexadecimal) format:

```
In [4]: hex(246)
Out[4]: '0xf6'
```

```
In [5]: hex(512)
Out[5]: '0x200'
```

Binary

Using the function bin() you can convert numbers into their binary (https://en.wikipedia.org/wiki/Binary_number) format.

```
In [19]: bin(1234)
Out[19]: '0b10011010010'
```

```
In [18]: bin(128)
Out[18]: '0b10000000'
```

```
In [16]: bin(512)
Out[16]: '0b1000000000'
```

pow()

With two arguments, equivalent to x^y. With three arguments, equivalent to (x^y) % z, but may be more efficient (e.g. for longs).

```
In [8]: pow(2,4)
Out[8]: 16
```

abs

Absolute Value

```
In [9]: abs(-3)
```

```
Out[9]: 3
```

```
In [10]: abs(3)
```

```
Out[10]: 3
```

round

Round a number to a given precision in decimal digits (default 0 digits). This always returns a floating point number.

```
In [11]: round(3)
```

```
Out[11]: 3.0
```

```
In [13]: round(3.1415926535,2)
```

```
Out[13]: 3.14
```

Python has a built-in math library that is also useful to play around with in case you are ever in need of some mathematical operations. Explore the documentation here (https://docs.python.org/2/library/math.html)!