

(Start of the lecture 8 notes)

LECTURE 8: TUPLES

Tuples

Like strings, but each element can be something other than a character and, we use (,) rather than (' ')

```
Costs = (1, 2.6, 7.1, -3.14)
Print (costs [0])
```

When to use

- Representing coordinates
- Health records
- Playing cards
- Map positions
- To return multiple values (return (name, age, gender))
- To swap values between variables (a, b) = (b, a)
- To test for one of a series of values (number in (12, 1, 2))
- As keys to dictionaries (see later...)

Mutability

Immutable – once created can't change elements
must create a whole new tuple

Lists

Mutable

Use [,] rather than (,)

```
['head' , 'tail' , 'tail']
[5, 5, 30, 10, 50]
[1, 2, 'buckles my shoe', 3.0, 4.0]
fruit = ['orange', 'apple', 'apple']
```