

## Knowledge Representation

### Activity 1

Vera, Winifred, Xanthippe, Yvette and Zelda are all women living in different UK cities (From West to East: Cardiff, Bristol, Bath, Oxford, London). They all have different shoe sizes (4,5,6,7,8) and have favourite foods (pizza, curry, pasta, sorbet and cake). Given the following clues, can you work out where each woman lives, how what size shoe she takes and what her favourite food is?

The smallest shoe is worn by either Vera or Yvette

Xanthippe's closest Western neighbour is a pizza lover; she also has a friend to the West who takes size 7 shoes

The Bristolian likes curry while Winifred prefers a dessert.

Xanthippe lives to the East of the lady with the largest feet, but this is not Zelda or Winifred (Yvette's neighbour-but-one to the East)

Vera lives in Oxford; the Welsh lady\* likes cake.

Zelda's feet are only just bigger than Yvette's but only just smaller than the lady who likes pasta

Fill in your answers in the table below.

Name	City	Shoe Size	Food
Vera			
Winifred			
Xanthippe			
Yvette			
Zelda			

1. The shortest member of the family is Victor or Eric **3 negations**
2. Derek's father is an apple lover; he also has an ancestor who is 175cm tall. **3 negations**
3. The great grandfather likes oranges while Walter prefers a vegetable **subclass**
4. Derek is descended from the tallest member of the family, but this is not Simon or Walter (Eric's grandson) **food = {fruit|veg}**
5. Victor is the father in the family tree; the great great grandfather likes Brussels sprouts
6. Simon is 10cm taller than Eric but 10cm shorter than the person who likes bananas **transitive : eric does not like bananas, 2+ people shorter than banana person**

	Relationship					Height (cm)					Favourite Food				
	Great Great Grandfather	Great Grandfather	Grandfather	Father	Son	145	155	165	175	185	Apples	Bananas	Brussels Sprouts	Oranges	Potatoes
Derek															
Eric															
Simon															
Victor															
Walter															
Apples	X														
Bananas	X														
Brussels Sprouts	X														
Oranges	✓	X	X	X	X										
Potatoes	X														
145cm															
155cm															
165cm															
175cm															
185cm															