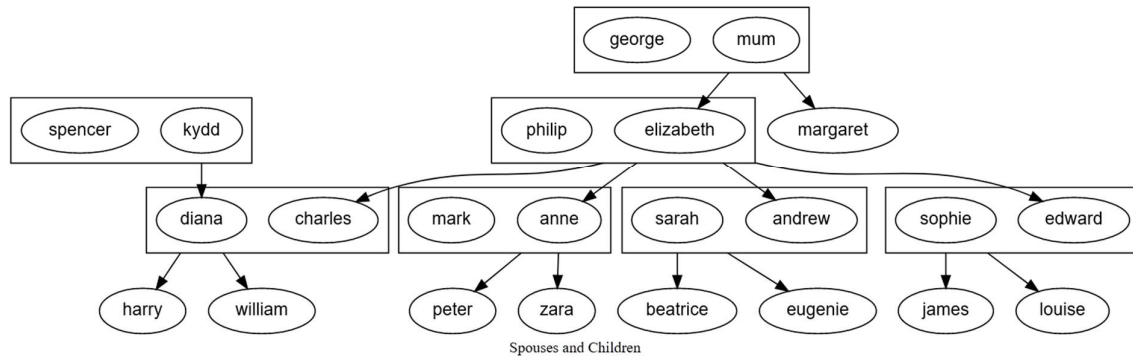


CSCI630 – Homework 2

Prolog-P

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Queries and outputs –

1. Who are Elizabeth's grandchildren?

→ Query: `setof(X, grandchildOf(X, elizabeth), Grandchildren).`

Output: `Grandchildren = [beatrice,eugenie,harry,james,louise,peter,william,zara]`

```
| ?- setof(X, grandchildOf(X, elizabeth), Grandchildren).  
Grandchildren = [beatrice,eugenie,harry,james,louise,peter,william,zara]  
yes
```

2. Who are Diana's brothers-in-law?

→ Query: `setof(X, brotherInLawOf(X, diana), BrotherInLaw).`

Output: `BrotherInLaw = [andrew,edward]`

```
| ?- setof(X, brotherInLawOf(X, diana), BrotherInLaw).  
BrotherInLaw = [andrew,edward]  
yes  
| ?-
```

3. Who are Zara's cousins?

→ Query: `setof(X, firstCousinOf(X, zara), CousinsOf).`

Output: `CousinsOf = [beatrice,eugenie,harry,james,louise,william]`

```
| ?- setof(X, firstCousinOf(X, zara), CousinsOf).
```

```
CousinsOf = [beatrice,eugenie,harry,james,louise,william]
```

```
yes  
| ?-
```

4. Who are Eugenie's ancestors?

→ Query: `setof(X, ancestorOf(X, eugenie), Ancestors).`

Output: `Ancestors = [andrew,elizabeth,george,mum,philip,sarah]`

```
| ?- setof(X, ancestorOf(X, eugenie), Ancestors).
```

```
Ancestors = [andrew,elizabeth,george,mum,philip,sarah]
```

```
yes  
| ?-
```
