Solution Exercise – 8

Q1:

- ```
  for $b in doc("books.xml")//book
   order by xs:float($b/price) descending, $b/title ascending
  return $b/title
  ```

- ```
  count(doc("books.xml")//book[author = 'Kargupta'])
  ```

- ```
  for $x in distinct-values(doc("books.xml")//author)
   return
  ```
  ```
  <name>{$x}</name>: <count>{count(doc("books.xml")//book[author= $x])}</count>
  ```

Q2.

- **To refer to date child element:**

  ```
  declare namespace def = "http://www.ethz.ch";
  ```

  ```
  /def:eth/def:date
  ```

- **To refer to date attribute which is in no namespace:**

  ```
  declare namespace def = "http://www.ethz.ch";
  /def:eth/@date
  ```

- **To refer to date attribute with namespace**

  ```
  declare namespace def = "http://www.ethz.ch";
  declare namespace dbisns ="http://www.dbis.ethz.ch";
  ```

  ```
  /def:eth/@dbisns:date
  ```

Q3.

- For example, $x = [1,2]$, so if $[1,2]=1$ and $[1,2]=2$; We cannot infer $1=2$ since it is not transitive.

- Let us say $x := 1, $y := (0, 3), $z := 2$
                  Then $1 > (0,3)$ and $(0,3) > 2$ but $1 > 2$ →which is false.
                  $>$ is not transitive either.

- $x := () because
  () eq () returns ()
  and () = () returns false