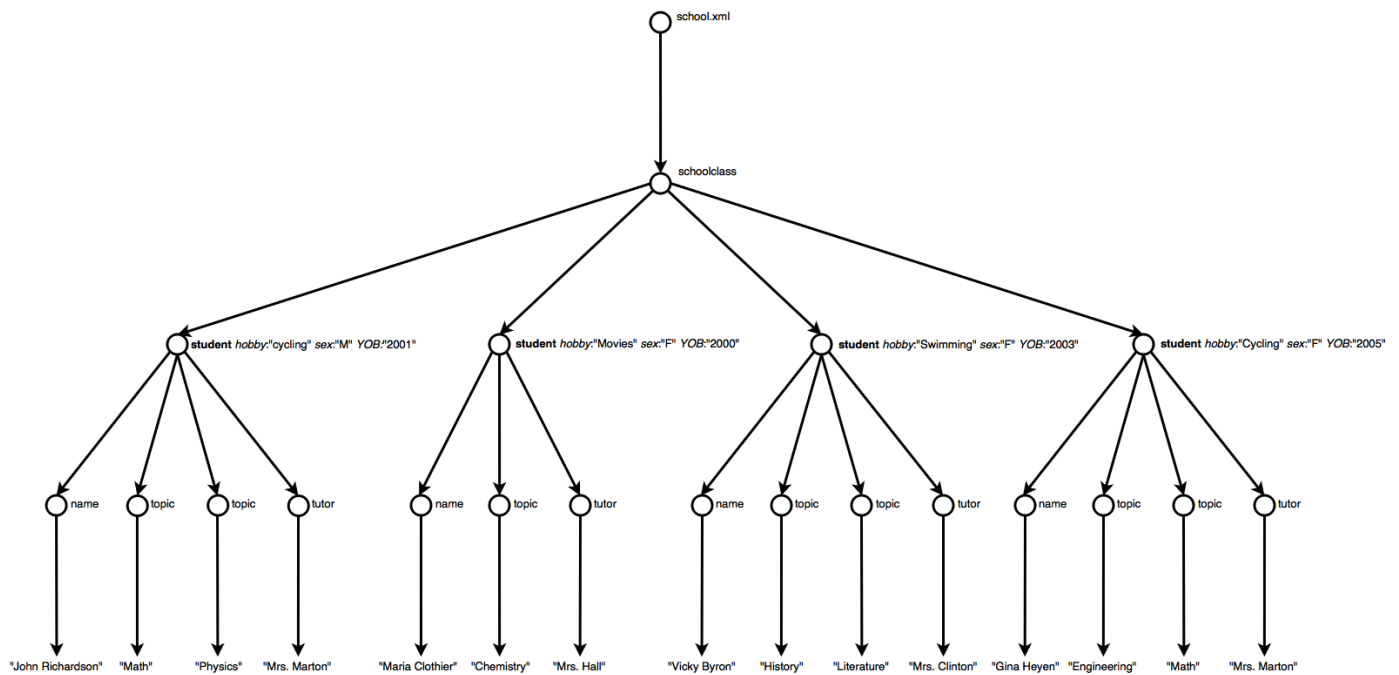


Software Systems and Application III – Advanced Databases Summative Report

Part A



Part B

XPath

1. `distinct-values(//student[@YOB>2000]/tutor)`

Output:

```
UntypedAtomic=' Mrs. Marton '
```

```
UntypedAtomic=' Mrs. Clinton '
```

2. `//student[topic[position() = 1][text() = ' Math ']]/name`

Output:

```
Element='<name> John Richardson </name>'
```

XQuery

1. for \$Student in //student
 where ((\$Student/topic = "Math" or \$Student/topic = "History") and (\$Student[@sex="F"]))
 return \$Student/topic[position()=2]

Output:

<topic>Literature</topic>

<topic>Math</topic>

2. let \$AverageAge := avg(//student[topic[text()='Math']]/@YOB)
 for \$Student in //student
 where (\$Student[@YOB<(\$AverageAge)])
 return \$Student/@hobby

Output:

hobby="cycling"

hobby="movies"

3. for \$Hobby in distinct-values(//student/@hobby)
 where count(//student[@hobby = \$Hobby]) > 1
 return \$Hobby

Output:

cycling