

Xpath & XQuery

Xpath

בחירת קודקוד לא חשוב איפה	//
בחירת קודקוד יחסי	/
בחירת משתנה	@
תנאי	[]
פונקציות אגרגטיביות	avg, count, max, contains

- Return all Title elements (of both departments and courses).
- //Title
- Return last names of all department chairs.
- //Department//Chair//Last_Name
- Return titles of courses with enrollment greater than 500.
- //Course[@Enrollment>500]//Title
- Return titles of departments that have some course that takes "CS106B" as a prerequisite.
- //Department[Course/Prerequisites/Prereq="CS106B"]//Title

- Return last names of all professors or lecturers who use a middle initial. Don't worry about eliminating duplicates.
- `(//Professor | //Lecturer)[Middle_Initial]/Last_Name`
- Return the count of courses that have a cross-listed course (i.e., that have "Cross-listed" in their description).
- `count(//Course[contains(Description, "Cross-listed")])`
- Return the average enrollment of all courses in the CS department.
- `avg(//Course[parent::Department/@Code="CS"]/@Enrollment)`

- Return last names of instructors teaching at least one course that has "system" in its description and enrollment greater than 100.
- `//Instructors/*[ancestor::Course[contains(Description, "system") and @Enrollment>100]]/Last_Name`
- Return the title of the course with the largest enrollment.
- `//Course[@Enrollment = max(//Course/@Enrollment)]/Title`

XQuery

- Return the area of Mongolia.
- for \$x in doc("countries.xml")//country where \$x/@name = "Mongolia" return \$x/data(@area)
- Return the average population of Russian-speaking countries.
- let \$rus :=
doc("countries.xml")//country[language="Russian"]/@population
- return avg(\$rus)