|  |  |  |  |
| --- | --- | --- | --- |
| **Lab No** | 6 | **Reg. No** | 260652 |
| **Student Name** | Alam Khalid | **Section** | A |

|  |
| --- |
| Solution Task 1 |
| <!DOCTYPE database [  <!ELEMENT database (students+,courses\_offered+)>  <!ELEMENT students (student+)>  <!ELEMENT student  (stID, Name, phone?, st\_no, street\_name, city, prov, courses\_taken\*, student\_status\_special|student\_status\_degree)>  <!ELEMENT stID (#PCDATA)>  <!ELEMENT Name (#PCDATA)>  <!ELEMENT phone (#PCDATA)>  <!ELEMENT st\_no (degree)>  <!ELEMENT street\_name (#PCDATA)>  <!ELEMENT city (#PCDATA)>  <!ELEMENT prov (#PCDATA)>  <!ELEMENT street\_name (#PCDATA)>  <!ELEMENT courses\_taken (#PCDATA)>  <!ELEMENT student\_status\_special (#PCDATA)>  <!ELEMENT student\_status\_degree (#PCDATA)>  <!ATTLIST student\_status\_degree degree CDATA #REQUIRED>  <!ELEMENT courses\_offered (courses+)>  <!ELEMENT courses (C\_ID, C\_Name, C\_dept, Allowable\_Student\_status+)>  <!ELEMENT C\_ID (#PCDATA)>  <!ELEMENT C\_Name (#PCDATA)>  <!ELEMENT C\_dept (#PCDATA)>  <!ELEMENT Allowable\_Student\_status (#PCDATA)>  ]> |

|  |
| --- |
| Solution Task 2 |
| <database>  <students>  <student>  <stID>995435245</stID>  <Name>Ali</Name>  <phone>416-42455979</phone>  <st\_no>406</st\_no>  <street\_name>Main</street\_name>  <city>Toronto</city>  <prov>ON</prov>  <courses\_taken>1</courses\_taken>  <courses\_taken>3</courses\_taken>  <courses\_taken>4</courses\_taken>  <courses\_taken>5</courses\_taken>  <student\_status\_degree degree='Bsc'>Degree Student</student\_status\_degree>  </student>  <student>  <stID>995267842</stID>  <Name>Bob</Name>  <phone>613-5345660</phone>  <st\_no>12</st\_no>  <street\_name>Charles</street\_name>  <city>Ottawa</city>  <prov>ON</prov>  <courses\_taken>3</courses\_taken>  <courses\_taken>4</courses\_taken>  <courses\_taken>5</courses\_taken>  <student\_status\_special>Special Student</student\_status\_special>  </student>  <student>  <stID>997458623</stID>  <Name>Carlos</Name>  <phone>905-2348638</phone>  <st\_no>5</st\_no>  <street\_name>King</street\_name>  <city>Oshawa</city>  <prov>ON</prov>  <student\_status\_special>Special Student</student\_status\_special>  </student>  </students>  <courses\_offered>  <courses>  <C\_ID>1</C\_ID>  <C\_Name>Introduction to Database</C\_Name>  <C\_dept>CS</C\_dept>  <Allowable\_Student\_status>Degree Student</Allowable\_Student\_status>  <Allowable\_Student\_status>Special Student</Allowable\_Student\_status>  </courses>  <courses>  <C\_ID>2</C\_ID>  <C\_Name>Numerical Methods</C\_Name>  <C\_dept>CS</C\_dept>  <Allowable\_Student\_status>Degree Student</Allowable\_Student\_status>  <Allowable\_Student\_status>Special Student</Allowable\_Student\_status>  </courses>  <courses>  <C\_ID>3</C\_ID>  <C\_Name>Operating Systems</C\_Name>  <C\_dept>CS</C\_dept>  <Allowable\_Student\_status>Degree Student</Allowable\_Student\_status>  </courses>  </courses\_offered>  </database> |

|  |
| --- |
| Solution Task 3 |
| <!DOCTYPE student [  <!ELEMENT student (firstName, lastName, id, plan)>  <!ELEMENT firstName (#PCDATA)>  <!ELEMENT lastName (#PCDATA)>  <!ELEMENT id (#PCDATA)>  <!ELEMENT plan (courses)>  <!ELEMENT courses (course\*)>  <!ATTLIST courses year CDATA #REQUIRED>  <!ELEMENT course (name, shortName, record?)>  <!ELEMENT name (#PCDATA)>  <!ELEMENT shortName (#PCDATA)>  <!ELEMENT record (grade, date)>  <!ELEMENT grade (#PCDATA)>  <!ELEMENT date (#PCDATA)>  ]> |

|  |
| --- |
| Solution Task 4 |
| <!DOCTYPE email[  <!ELEMENT email (from, to, content)>  <!ELEMENT from (#PCDATA)>  <!ELEMENT to (#PCDATA)>  <!ELEMENT content (#PCDATA|course|person|exercises)\*>  <!ELEMENT course (#PCDATA)>  <!ELEMENT person (#PCDATA)>  <!ELEMENT exercises (exercise\*)>  <!ELEMENT exercise (topic, description)>  <!ELEMENT topic (#PCDATA)>  <!ELEMENT description (#PCDATA)>  ]> |