Ain Shams University

Faculty of Engineering

AIN SHAMS UNIVERSITY

FACULTY OF ENGINEERING

CREDIT HOURS ENG. PROGRAM

Computer engineering and software systems

CSE346

Advanced Database Project

Hospital Database

Submitted to:

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Submitted by:

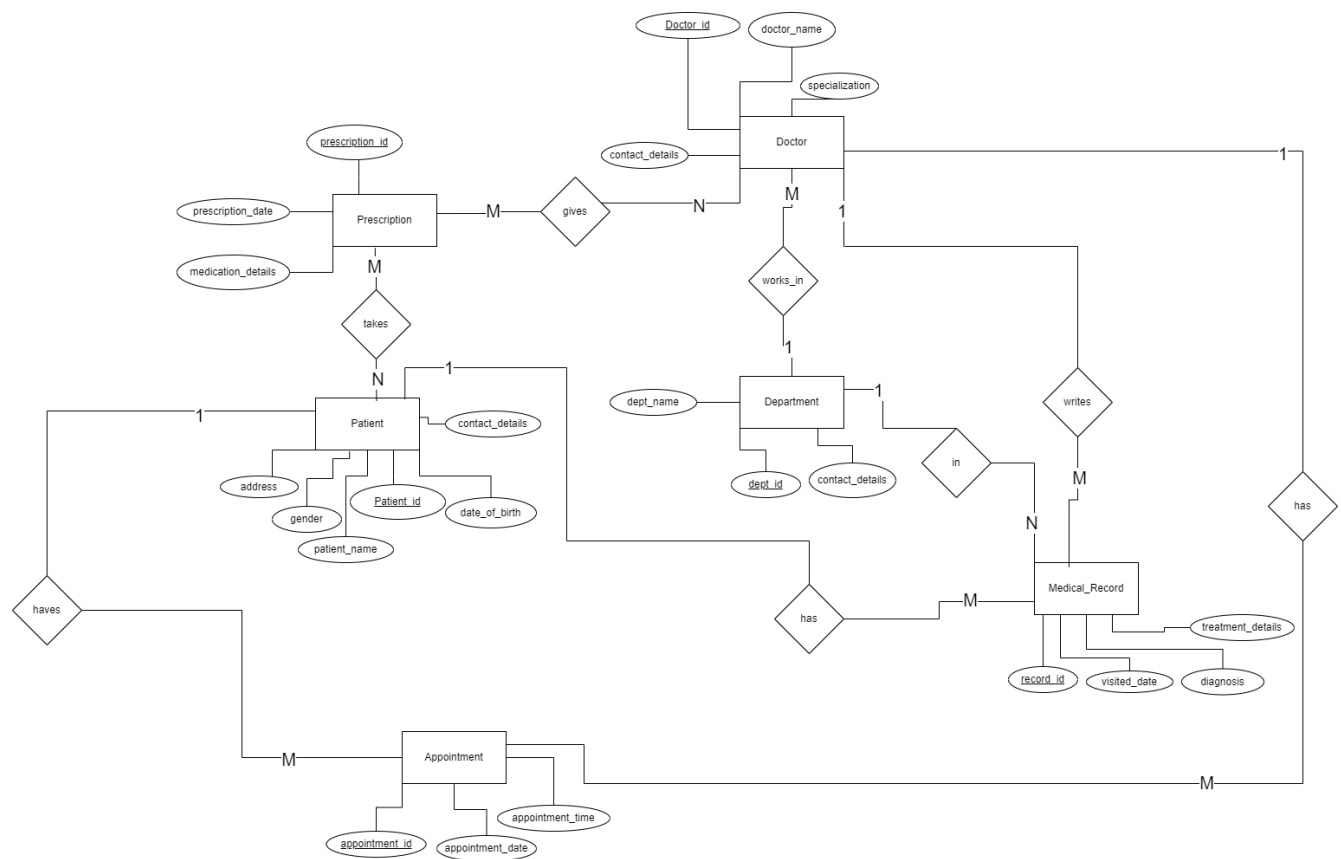| Seif eldin Ashraf Mahmoud Aref	20P7101
Mohamed Hesham El Said Zidan	20p7579
Omar Magdy Mostafa	1900884
Mahmoud Talaat El-sayed	2001366

Contents

Relevance

How to write xml and it's XSD schema and how to query's for then using Xpath and Xquery

Abstract

The idea of the Project is to make a XML file with it's XSD schema for a Hospital than searching in this XML file using Xpath, Xquery , adding new data in the XML file

ER diagram for database

XML file implementation

```xml
<?xml version="1.0" encoding="UTF-8" standalone="no"?>

<?xml-model href="Hospital.xsd"?>
<hospital>

<Departments>

<Department dept_id = "d1">
<dept_name> Cardiology </dept_name>
<contact_details> 0112345 </contact_details>
</Department>

<Department dept_id = "d2">
<dept_name> surgeon </dept_name>
<contact_details> 0112356 </contact_details>
</Department>

<Department dept_id = "d3">
<dept_name> General Medicine</dept_name>
<contact_details> 0122345 </contact_details>
</Department>

<Department dept_id = "d4">
<dept_name> neurology </dept_name>
<contact_details> 0122356 </contact_details>
</Department>

<Department dept_id = "d5">
<dept_name> Psichiatry </dept_name>
<contact_details> 0122357 </contact_details>
</Department>

<Department dept_id = "d6">
<dept_name> Pharmacist </dept_name>
<contact_details> 0122358 </contact_details>
</Department>

<Department dept_id = "d7">
<dept_name> Haematology </dept_name>
<contact_details> 0122367 </contact_details>
</Department>
```

```xml
<Department dept_id = "d8">
<dept_name> Physiotherapy </dept_name>
<contact_details> 0122478 </contact_details>
</Department>

<Department dept_id ="d9">
<dept_name> Dietician </dept_name>
<contact_details> 0122578 </contact_details>
</Department>

<Department dept_id = "d10">
<dept_name> Emergency Department </dept_name>
<contact_details> 0123459 </contact_details>
</Department>

</Departments>

<Doctors>

<Doctor doctor_id = "d1" dept_id = "d1">
<doctor_name>
<First_name> doc1 </First_name>
<Last_name> name1 </Last_name>
 </doctor_name>
<speciality> Cardiologist </speciality>
<contact_details>
<Email> doc1@gmail.com </Email>
<phone_number>0122367 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d2" dept_id = "d7">
<doctor_name>
<First_name> doc2 </First_name>
<Last_name> name2 </Last_name>
 </doctor_name>
<speciality> Haematologist </speciality>
<contact_details>
<Email> doc2@gmail.com </Email>
<phone_number>0122345 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d3" dept_id = "d10">
```

```xml
<doctor_name>
<First_name> doc3 </First_name>
<Last_name> name3 </Last_name>
</doctor_name>
<speciality> Emergency </speciality>
<contact_details>
<Email> doc3@Yahoo.com </Email>
<phone_number>011234 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d4" dept_id = "d2" Prescription_id="1">
<doctor_name>
<First_name> Seif Eldin </First_name>
<Last_name> Ashraf </Last_name>
</doctor_name>
<speciality> surgeon </speciality>
<contact_details>
<Email> Seif@gmail.com </Email>
<phone_number>01222510 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d5" dept_id = "d6" Prescription_id="3">
<doctor_name>
<First_name> Mohamed </First_name>
<Last_name> Hesham </Last_name>
</doctor_name>
<speciality> Pharmacist </speciality>
<contact_details>
<Email> Mohamed@gmail.com </Email>
<phone_number>0121345 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d6" dept_id = "d10" >
<doctor_name>
<First_name> Omar </First_name>
<Last_name> Magdy </Last_name>
</doctor_name>
<speciality> Emergency </speciality>
<contact_details>
<Email> Omar@Yahoo.com </Email>
<phone_number>0101345 </phone_number>
 </contact_details>
```

```xml
</Doctor>

<Doctor doctor_id = "d7" dept_id = "d10" Prescription_id="2">
<doctor_name>
<First_name> Mahmoud </First_name>
<Last_name> Talaat </Last_name>
 </doctor_name>
<speciality> Emergency </speciality>
<contact_details>
<Email> Mahmoud@Yahoo.com </Email>
<phone_number>0109345 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d8" dept_id = "d9" Prescription_id="1 4">
<doctor_name>
<First_name> Youssef </First_name>
<Last_name> ElNagy </Last_name>
 </doctor_name>
<speciality> Dietician </speciality>
<contact_details>
<Email> Youssef1@gmail.com </Email>
<phone_number>0108345 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d9" dept_id = "d1" >
<doctor_name>
<First_name> Youssef </First_name>
<Last_name> Mohamed </Last_name>
 </doctor_name>
<speciality> Cardiologist </speciality>
<contact_details>
<Email> Youssef2@Yahoo.com </Email>
<phone_number>0107345 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d10" dept_id = "d8" Prescription_id="7">
<doctor_name>
<First_name> Abdelrahman </First_name>
<Last_name> Ayman </Last_name>
 </doctor_name>
<speciality> Physiotherapist </speciality>
<contact_details>
```

```xml
<Email> Abdelrahman@gmail.com </Email>
<phone_number>01117345 </phone_number>
 </contact_details>
</Doctor>


<Doctor doctor_id = "d11" dept_id = "d2" Prescription_id="2">
<doctor_name>
<First_name> Seif Eldin </First_name>
<Last_name> Mahmoud </Last_name>
 </doctor_name>
<speciality> surgeon </speciality>
<contact_details>
<Email> S@gmail.com </Email>
<phone_number>01112245 </phone_number>
 </contact_details>
</Doctor>



<Doctor doctor_id = "d12" dept_id = "d4">
<doctor_name>
<First_name> doc4 </First_name>
<Last_name> name1 </Last_name>
 </doctor_name>
<speciality> neurologist </speciality>
<contact_details>
<Email> doc4@gmail.com </Email>
<phone_number>01162245 </phone_number>
 </contact_details>
</Doctor>



<Doctor doctor_id = "d13" dept_id = "d3" Prescription_id="6">
<doctor_name>
<First_name> doc1 </First_name>
<Last_name> name6 </Last_name>
 </doctor_name>
<speciality> General Medicine </speciality>
<contact_details>
<Email> doc11@gmail.com </Email>
<phone_number>01262245 </phone_number>
 </contact_details>
</Doctor>

<Doctor doctor_id = "d14" dept_id = "d5" Prescription_id="5">
<doctor_name>
```

```xml
<First_name> Abdelrahman </First_name>
<Last_name> Ayman </Last_name>
 </doctor_name>
<speciality> Psichiatrist </speciality>
<contact_details>
<Email> Ayman@gmail.com </Email>
<phone_number>0129876 </phone_number>
 </contact_details>
</Doctor>

</Doctors>

<Patients>
    <Patient Patient_id = "1" Prescription_id="1">
        <Patient_name>
            <First_Name>Mohamed</First_Name>
            <Last_Name>Mohamed</Last_Name>
        </Patient_name>
        <gender>Male</gender>
        <date_of_birth>2000-01-25</date_of_birth>
        <address>Cairo</address>
        <contact_details>012245</contact_details>
    </Patient>

    <Patient Patient_id = "2" Prescription_id= "7">
        <Patient_name>
            <First_Name>Ahmed</First_Name>
            <Last_Name>Mohamed</Last_Name>
        </Patient_name>
        <gender>Male</gender>
        <date_of_birth>1978-01-25</date_of_birth>
        <address>Giza</address>
        <contact_details>0121145</contact_details>
    </Patient>

    <Patient Patient_id = "3" Prescription_id="2 5">
        <Patient_name>
            <First_Name>Mohamed</First_Name>
            <Last_Name>Ahmed</Last_Name>
        </Patient_name>
        <gender>Male</gender>
        <date_of_birth>2003-07-02</date_of_birth>
        <address>Cairo</address>
        <contact_details>012295</contact_details>
    </Patient>
```

```xml
<Patient Patient_id = "4" >
    <Patient_name>
        <First_Name>Patient1</First_Name>
        <Last_Name>name1</Last_Name>
    </Patient_name>
    <gender>Female</gender>
    <date_of_birth>1999-05-05</date_of_birth>
    <address>Cairo</address>
    <contact_details>011190</contact_details>
</Patient>

<Patient Patient_id = "5" Prescription_id="1">
    <Patient_name>
        <First_Name>Patient2</First_Name>
        <Last_Name>Name2</Last_Name>
    </Patient_name>
    <gender>Female</gender>
    <date_of_birth>2001-03-02</date_of_birth>
    <address>Giza</address>
    <contact_details>011245</contact_details>
</Patient>

<Patient Patient_id = "6" >
    <Patient_name>
        <First_Name>Patient3</First_Name>
        <Last_Name>Name3</Last_Name>
    </Patient_name>
    <gender>Male</gender>
    <date_of_birth>2002-09-01</date_of_birth>
    <address>Alexandria</address>
    <contact_details>019905</contact_details>
</Patient>

<Patient Patient_id = "7" Prescription_id="6">
    <Patient_name>
        <First_Name>Patient3</First_Name>
        <Last_Name>Name4</Last_Name>
    </Patient_name>
    <gender>Female</gender>
    <date_of_birth>2002-09-08</date_of_birth>
    <address>Alexandria</address>
    <contact_details>0102345</contact_details>
</Patient>
```

```xml
    <Patient Patient_id = "8" Prescription_id="3">
        <Patient_name>
            <First_Name>Patient4</First_Name>
            <Last_Name>Mohamed</Last_Name>
        </Patient_name>
        <gender>Male</gender>
        <date_of_birth>1980-03-30</date_of_birth>
        <address>Cairo</address>
        <contact_details>0122905</contact_details>
    </Patient>

    <Patient Patient_id = "9" Prescription_id = "4">
        <Patient_name>
            <First_Name>Patient5</First_Name>
            <Last_Name>Name5</Last_Name>
        </Patient_name>
        <gender>Female</gender>
        <date_of_birth>1980-03-30</date_of_birth>
        <address>Giza</address>
        <contact_details>0125905</contact_details>
    </Patient>

    <Patient Patient_id = "10" Prescription_id="2">
        <Patient_name>
            <First_Name>Patient6</First_Name>
            <Last_Name>Name6</Last_Name>
        </Patient_name>
        <gender>Female</gender>
        <date_of_birth>1990-03-30</date_of_birth>
        <address>Cairo</address>
        <contact_details>01225905</contact_details>
    </Patient>

    <Patient Patient_id = "11" Prescription_id ="3" >
        <Patient_name>
            <First_Name>Patient7</First_Name>
            <Last_Name>Name7</Last_Name>
        </Patient_name>
        <gender>Male</gender>
        <date_of_birth>1995-11-15</date_of_birth>
        <address>Cairo</address>
        <contact_details>01225935</contact_details>
    </Patient>

</Patients>
```

```xml
<Prescriptions>
    <Prescription Prescription_id = "1" Patient_id = "1 5" Doctor_id = "d4 d8">
        <Prescription_date>2024-11-12</Prescription_date>
        <medication_details>
            <name>name1</name>
            <dose>100</dose>
            <duration>50</duration>
        </medication_details>
    </Prescription>

    <Prescription Prescription_id = "2" Patient_id = "3 10" Doctor_id = "d7 d11">
        <Prescription_date>2024-01-14</Prescription_date>
        <medication_details>
            <name>name2</name>
            <dose>50</dose>
            <duration>20</duration>
        </medication_details>
    </Prescription>

    <Prescription Prescription_id = "3" Patient_id = "8 11" Doctor_id = "d5">
        <Prescription_date>2024-02-15</Prescription_date>
        <medication_details>
            <name>name3</name>
            <dose>150</dose>
            <duration>60</duration>
        </medication_details>
    </Prescription>

    <Prescription Prescription_id = "4" Patient_id = "9" Doctor_id = "d8">
        <Prescription_date>2024-07-02</Prescription_date>
        <medication_details>
            <name>name4</name>
            <dose>200</dose>
            <duration>5</duration>
        </medication_details>
    </Prescription>

    <Prescription Prescription_id = "5" Patient_id = "3" Doctor_id = "d14">
        <Prescription_date>2024-05-17</Prescription_date>
        <medication_details>
            <name>name5</name>
            <dose>250</dose>
            <duration>15</duration>
        </medication_details>
```

```xml
        </Prescription>

        <Prescription Prescription_id = "6" Patient_id = "7" Doctor_id = "d13">
            <Prescription_date>2024-06-19</Prescription_date>
            <medication_details>
                <name>name6</name>
                <dose>350</dose>
                <duration>10</duration>
            </medication_details>
        </Prescription>

        <Prescription Prescription_id = "7" Patient_id = "2" Doctor_id = "d10">
            <Prescription_date>2024-06-19</Prescription_date>
            <medication_details>
                <name>name7</name>
                <dose>150</dose>
                <duration>15</duration>
            </medication_details>
        </Prescription>

</Prescriptions>

<Medical_records>

<Medical_record Medical_record_id = "1" Patient_id = "5" Department_id = "3"
Doctor_id="d10">
<diagnosis>diagnosis1</diagnosis>
<treatment_details>treatment1</treatment_details>
<visited_date>2023-06-02</visited_date>
</Medical_record>

<Medical_record Medical_record_id = "2" Patient_id = "2" Department_id = "5"
Doctor_id="d10">
    <diagnosis>diagnosis1</diagnosis>
    <treatment_details>treatment1</treatment_details>
    <visited_date>2024-03-02</visited_date>
    </Medical_record>

    <Medical_record Medical_record_id = "3" Patient_id = "5" Department_id = "10"
Doctor_id="d13">
        <diagnosis>diagnosis2</diagnosis>
        <treatment_details>treatment2</treatment_details>
        <visited_date>2024-03-10</visited_date>
        </Medical_record>
```

```xml
        <Medical_record Medical_record_id = "4" Patient_id = "10" Department_id =
"5" Doctor_id="d2">
            <diagnosis>diagnosis3</diagnosis>
            <treatment_details>treatment3</treatment_details>
            <visited_date>2024-03-10</visited_date>
            </Medical_record>

            <Medical_record Medical_record_id = "5" Patient_id = "1"
Department_id = "8" Doctor_id="d5">
                <diagnosis>diagnosis4</diagnosis>
                <treatment_details>treatment3</treatment_details>
                <visited_date>2024-10-10</visited_date>
                </Medical_record>

                <Medical_record Medical_record_id = "6" Patient_id = "9"
Department_id = "7" Doctor_id="d14">
                    <diagnosis>diagnosis4</diagnosis>
                    <treatment_details>treatment4</treatment_details>
                    <visited_date>2024-11-20</visited_date>
                    </Medical_record>

                    <Medical_record Medical_record_id = "7" Patient_id = "10"
Department_id = "2" Doctor_id="d9">
                        <diagnosis>diagnosis5</diagnosis>
                        <treatment_details>treatment5</treatment_details>
                        <visited_date>2024-09-19</visited_date>
                        </Medical_record>

</Medical_records>

<Appointments>

<Appointment Appointment_id="1" Patient_id="5" Doctor_id="d10">
<appointment_date>2024-12-09</appointment_date>
<appointment_time>9 Am</appointment_time>
</Appointment>

<Appointment Appointment_id="2" Patient_id="7" Doctor_id="d14">
    <appointment_date>2024-12-09</appointment_date>
    <appointment_time>9 Am</appointment_time>
    </Appointment>

    <Appointment Appointment_id="3" Patient_id="8" Doctor_id="d11">
        <appointment_date>2024-12-09</appointment_date>
        <appointment_time>10 Am</appointment_time>
```

```xml
        </Appointment>

        <Appointment Appointment_id="3" Patient_id="10" Doctor_id="d11">
            <appointment_date>2024-12-09</appointment_date>
            <appointment_time>12 pm</appointment_time>
        </Appointment>

        <Appointment Appointment_id="4" Patient_id="7" Doctor_id="d1">
            <appointment_date>2024-11-09</appointment_date>
            <appointment_time>1 pm</appointment_time>
        </Appointment>

        <Appointment Appointment_id="5" Patient_id="3" Doctor_id="d12">
            <appointment_date>2024-05-25</appointment_date>
            <appointment_time>6 pm</appointment_time>
        </Appointment>

        <Appointment Appointment_id="6" Patient_id="7"
Doctor_id="d14">
                <appointment_date>2024-11-09</appointment_date>
                <appointment_time>9 Am</appointment_time>
            </Appointment>

            <Appointment Appointment_id="7" Patient_id="1"
Doctor_id="d1">
                    <appointment_date>2024-07-10</appointment_date>
                    <appointment_time>7 pm</appointment_time>
                </Appointment>

</Appointments>

</hospital>
```

XSD schema design

```xml
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <xsd:element name="hospital" type="HospitalType"/>
    <xsd:element name="Departments" type="DepartmentsType"/>
    <xsd:element name="Doctors" type="DoctorsType"/>
    <xsd:element name="Patients" type="PatientsType"/>
    <xsd:element name="Prescriptions" type="PrescriptionsType"/>
    <xsd:element name="Medical_records" type="Medical_recordsType"/>
    <xsd:element name="Appointments" type="AppointmentsType"/>
```

```xml
<xsd:element name ="Department">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name = "dept_name" type = "xsd:string"/>
            <xsd:element name = "contact_details" type = "xsd:string"/>
        </xsd:sequence>
        <xsd:attribute name = "dept_id" type = "xsd:string" use = "required"/>
    </xsd:complexType>
</xsd:element>

<xsd:element name = "Doctor">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name ="doctor_name">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="First_name" type="xsd:string"/>
                        <xsd:element name="Last_name" type="xsd:string"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name = "speciality" type="xsd:string"/>

            <xsd:element name ="contact_details">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="Email" type="xsd:string"/>
                        <xsd:element name="phone_number" type="xsd:string"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="doctor_id" type="xsd:string" use="required"/>
        <xsd:attribute name = "dept_id" type = "xsd:string" use="required"/>
        <xsd:attribute name = "Prescription_id" type="xsd:string"/>
    </xsd:complexType>
</xsd:element>

<xsd:element name = "Patient">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name ="Patient_name">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="First_Name" type="xsd:string"/>
```

```xml
                    <xsd:element name="Last_Name" type="xsd:string"/>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name = "gender" type="xsd:string"/>
        <xsd:element name = "date_of_birth" type="xsd:date"/>
        <xsd:element name = "address" type="xsd:string"/>
        <xsd:element name ="contact_details" type = "xsd:string"/>
    </xsd:sequence>
    <xsd:attribute name="Patient_id" type="xsd:string" use="required"/>
    <xsd:attribute name = "Prescription_id" type="xsd:string"/>
    </xsd:complexType>
</xsd:element>

<xsd:element name ="Prescription">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name = "Prescription_date" type = "xsd:date"/>
            <xsd:element name ="medication_details">
                <xsd:complexType>
                    <xsd:sequence>
                        <xsd:element name="name" type="xsd:string"/>
                        <xsd:element name="dose" type="xsd:integer"/>
                        <xsd:element name = "duration" type="xsd:integer"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
        <xsd:attribute name = "Prescription_id" type = "xsd:string"
use="required"/>
        <xsd:attribute name = "Patient_id" type = "xsd:string" use="required"/>
        <xsd:attribute name = "Doctor_id" type = "xsd:string" use="required"/>
    </xsd:complexType>
</xsd:element>

<xsd:element name="Medical_record">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="diagnosis" type = "xsd:string"/>
            <xsd:element name="treatment_details" type="xsd:string"/>
            <xsd:element name="visited_date" type="xsd:date"/>
        </xsd:sequence>
        <xsd:attribute name = "Medical_record_id" type="xsd:string"
use="required"/>
        <xsd:attribute name = "Department_id" type="xsd:string" use="required"/>
```

```xml
            <xsd:attribute name = "Patient_id" type = "xsd:string" use="required"/>
            <xsd:attribute name = "Doctor_id" type = "xsd:string" use="required"/>
        </xsd:complexType>
</xsd:element>

<xsd:element name ="Appointment">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name = "appointment_date" type = "xsd:date"/>
            <xsd:element name = "appointment_time" type = "xsd:string"/>
        </xsd:sequence>
        <xsd:attribute name = "Appointment_id" type = "xsd:string" use =
"required"/>
        <xsd:attribute name = "Patient_id" type = "xsd:string" use="required"/>
        <xsd:attribute name = "Doctor_id" type = "xsd:string" use="required"/>
    </xsd:complexType>
</xsd:element>


    <xsd:complexType name="HospitalType">
        <xsd:sequence>
            <xsd:element ref = "Departments" />
            <xsd:element ref = "Doctors" />
            <xsd:element ref = "Patients" />
            <xsd:element ref = "Prescriptions" />
            <xsd:element ref = "Medical_records" />
            <xsd:element ref = "Appointments" />
        </xsd:sequence>
    </xsd:complexType>

    <xsd:complexType name="DepartmentsType">
        <xsd:sequence>
            <xsd:element ref = "Department"  minOccurs="1"
maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>

    <xsd:complexType name="DoctorsType">
        <xsd:sequence>
            <xsd:element ref = "Doctor"  minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>

    <xsd:complexType name="PatientsType">
```

```xml
        <xsd:sequence>
            <xsd:element ref = "Patient"  minOccurs="1" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>


    <xsd:complexType name="PrescriptionsType">
        <xsd:sequence>
            <xsd:element ref = "Prescription"  minOccurs="1"
maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>


    <xsd:complexType name="Medical_recordsType">
        <xsd:sequence>
            <xsd:element ref = "Medical_record"  minOccurs="1"
maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>


    <xsd:complexType name="AppointmentsType">
        <xsd:sequence>
            <xsd:element ref = "Appointment"  minOccurs="1"
maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>


</xsd:schema>
```

Results and Analysis

Get doctor data for doctor with id d12 and dept id d4

```
/hospital/Doctors/Doctor[@doctor_id='d12' and @dept_id='d4']
```

```
Doctor <{'doctor_id': 'd12', 'dept_id': 'd4'}> :
doctor_name:
First_name :   doc4
Last_name :   name1
-------------
speciality :   neurologist
contact_details:
Email :   doc4@gmail.com
phone_number : 01162245
-------------
```

Get patient data for patient born in 1990-03-30

```
Enter another Query Please/hospital/Patients/Patient[date_of_birth = '1990-03-30']
Patient <{'Patient_id': '10', 'Prescription_id': '2'}> :
Patient_name:
First_Name : Patient6
Last_Name : Name6
-------------
gender : Female
date_of_birth : 1990-03-30
address : Cairo
contact_details : 01225905
-------------
```

Get patient data for patients with address Giza or Alexandria

```
/hospital/Patients/Patient[address = 'Giza' or address = 'Alexandria']
```

```
Patient <{'Patient_id': '2', 'Prescription_id': '7'}> :
Patient_name:
First_Name : Ahmed
Last_Name : Mohamed
-------------
gender : Male
date_of_birth : 1978-01-25
address : Giza
contact_details : 0121145
```

```
--------------
Patient <{'Patient_id': '5', 'Prescription_id': '1'}> :
Patient_name:
First_Name : Patient2
Last_Name : Name2
--------------
gender : Female
date_of_birth : 2001-03-02
address : Giza
contact_details : 011245
```

```
--------------
Patient <{'Patient_id': '6'}> :
Patient_name:
First_Name : Patient3
Last_Name : Name3
--------------
gender : Male
date_of_birth : 2002-09-01
address : Alexandria
contact_details : 019905
```

```
Patient <{'Patient_id': '7', 'Prescription_id': '6'}> :
Patient_name:
First_Name : Patient3
Last_Name : Name4
--------------
gender : Female
date_of_birth : 2002-09-08
address : Alexandria
contact_details : 0102345
--------------
```

```
--------------
Patient <{'Patient_id': '9', 'Prescription_id': '4'}> :
Patient_name:
First_Name : Patient5
Last_Name : Name5
--------------
gender : Female
date_of_birth : 1980-03-30
address : Giza
contact_details : 0125905
--------------
```

Get Medication details of medicine with dose 150 or duration 15

```
Enter another Query Please/hospital/Prescriptions/Prescription/medication_details[duration ='15'or dose = '150']
```

```
medication_details:
name : name3
dose : 150
duration : 60
```

```
medication_details:
name : name5
dose : 250
duration : 15
```

```
medication_details:
name : name7
dose : 150
duration : 15
```

Get appointments for doctor with id d11.

```
Enter another Query Please/hospital/Appointments/Appointment[@Doctor_id = 'd11']
Appointment <{'Appointment_id': '3', 'Patient_id': '8', 'Doctor_id': 'd11'}> :
appointment_date : 2024-12-09
appointment_time : 10 Am
-------------
Appointment <{'Appointment_id': '3', 'Patient_id': '10', 'Doctor_id': 'd11'}> :
appointment_date : 2024-12-09
appointment_time : 12 pm
-------------
```