1. Selfhelp is an attendance management system at VIT. For a given employee get his name, entry date and time and exit date and time of a day as Javascript date object. If the hours in between is 8 hours mark as “present” else throw an exception stating “absent”.

2. Create a XML file for movies. Apply CSS for better presentation on the XML file. A movie has title, genere, release year, language. Use XSD to provide a choice of language can be tamil, English and hindi. Use XSD to provide check if release date is in date format using regular expression. Also ensure release year must be with in 2000-2022.

Hint to use choice:

<?xml version="1.0" encoding="utf-8"?>

<xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified" xmlns:xs="http://www.w3.org/2001/XMLSchema">

<xs:element name="root" type="root"/>

<xs:complexType name="root">

<xs:choice>

<xs:sequence>

<xs:element name="empno" type="xs:string" />

<xs:element name="designation" type="xs:string" />

</xs:sequence>

<xs:sequence>

<xs:element name="name" type="xs:string" />

<xs:element name="age" type="xs:unsignedByte" />

</xs:sequence>

</xs:choice>

</xs:complexType>

</xs:schema>

3. Write a simple application using node js and mongo db for a health cube. Create a collection for patients. Insert patient details. Fetch a patient record based on patient id. Fetch all patient records whose name starts with ‘A’. Update patient age to 40 for a patient with patient id:123. Sort the patient ids based on age and display. Find the patient name who has paid maximum fee. Delete record of a patient based on a certain patient id.

4. Assume you are developing an online solution for a school. Discuss all the doimain names and which domain is most suitable for online student management system. Explain important internet protocols. What are the security vulnerabilities in this online solution.