XML in DB2

Task 1. Select XML data with XPath and XQuery

1. Start command line processor
2. Start DB2 instance (db2start)
3. Start DataStudio
4. Connect to SAMPLE db
5. In the table CUSTOMER, read what are the data types of columns. How XML data are stored? Select and read XML data of customers (use XML editor in DataStudio).
6. Write query in XQuery to
    a. Select all data from the column INFO
    (hint: use XQUERY xmlcolumn function to read XML data:
    xquery db2-fn:xmlcolumn("CUSTOMER.INFO");)
    b. Select all elements name
    c. For all customers, select their names, but only the text value
    d. Select all data of customer with id 1003
    e. Select names of customers with id 1003 or 1005 (only text value)
    f. Select all phone numbers of customer with id 1005
    g. Select all home phone numbers of customer with id 1005
    h. Select all data of customers that have an assistant
    i. Select names and work phone numbers of customers that have an assistant
    j. Select names of all assistants (only text value)
    k. Select names and phone numbers of all assistants (only text values)
    l. For any customer from Canada who has a home phone number, select the name of the assistant (only text value)
    m. Select names and phone numbers of all customers from Toronto
    n. Select names and phone numbers of assistants of all customers from Toronto

7. Write XQuery FLWOR expression to
    a. Select a sequence containing names and phone numbers of all customers
    b. Select a sequence containing names and phone numbers of all customers, but select only the work phone numbers
    c. Select a sequence containing names and all phone numbers of all customers that have a home phone number
    d. Select a sequence containing names of customers (only text) and for each customer who has an assistant, the name of the assistant; use XPath if:
    if (condition) then (expression1) else (expression2)
    e. Select the names of all customers that have an assistant, and the names and phone numbers of the assistants (use where and let)
    f. Select names of all customers and the how many phone numbers each of them has (use function COUNT())

8. Use function sqlquery, to instead of reading the whole XML column, select only some of the rows, and do the queries:
    xquery db2-fn:sqlquery("select INFO from customer");
    a. Select all data of customer with id 1003
    b. Select names of customers with id 1003 or 1005 (only text value)
    c. Select phone numbers of customer with id 1005
    d. Select home phone numbers of each customer with id less than 1005