Name: _____

Date/Time: _____
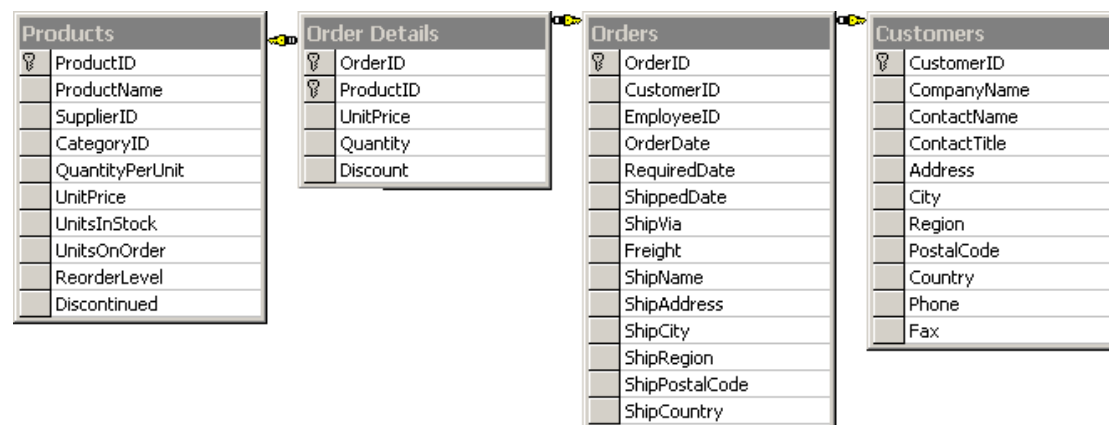
- o **The questions are designed to assess your scope of knowledge, and not your competency.**

- o **Skip any question if you are not familiar with it, you do not have to attempt all the questions.**

- o **Please save the answers on the desktop.**

- o **You can refer to Internet if necessary.**

Avg Time: 1 hours

Database: □ Microsoft SQL

□ MySQL

□ Oracle

Programming: □ Netbeans (Java)

□ Eclipse

□ JBoss Developer Studio

□ Others:

Refer to the Northwind database below for the following questions.

Products	Order Details	Orders	Customers
ProductID	OrderID	OrderID	CustomerID
ProductName	ProductID	CustomerID	CompanyName
SupplierID	UnitPrice	EmployeeID	ContactName
CategoryID	Quantity	OrderDate	ContactTitle
QuantityPerUnit	Discount	RequiredDate	Address
UnitPrice		ShippedDate	City
UnitsInStock		ShipVia	Region
UnitsOnOrder		Freight	PostalCode
ReorderLevel		ShipName	Country
Discontinued		ShipAddress	Phone
		ShipCity	Fax
		ShipRegion	
		ShipPostalCode	
		ShipCountry	

1. SQL statements

    a. List all the customer names who do not have any single order.

    b. List all the unique customer names who had ordered products that contain the word "Lager".

    c. For each customer, display the number of orders with the order date in the year of 1998.

2. Choose either a or b.

    a. The management will like to reward the top 10 customers who have the most orders within the time period.

       Write a web application that allows the management to query the top 10 customers who have the most orders. The web application should allow the user to be able to enter a date range to query, the date range will be based on order date.

Database info (username and password)

SQL Server: schema is Northwind
sa/Cxrus-123

MySQL: localhost:3306, schema is northwind
root/Cxrus-123

Oracle
northwind/Cxrus-123

Development tool

Editor

Eclipse

Redhat JBoss Developer Studio

NetBeans IDE

JDBC Driver

Refer to C:\Documents and Settings\Cxrus\Desktop\connectors-java

Notes:
- You have Internet access
- You may use any building tools e.g. maven, ant or gradle
- 8080 port is used by Oracle, you may need to configure the tomcat server to run on 8081, if you are using eclipse default workspace, workspace has already had tomcat and port number is already configured to 8081

Start Date: 1/1/1998
End Date: 12/31/1998
[Submit]

Contact Name	Orders
Jose Pavarotti	11
Maria Larsson	9
Roland Mendel	9
Elizabeth Lincoln	8
Horst Kloss	8
Felipe Izquierdo	7
José Pedro Freyre	7
Mario Pontes	7
Carlos Hernández	6
Laurence Lebihan	6

b. Create a simple CRUD web application using any tools / any resources that you are aware of.