

Last digit of your NUID: 1, 2 or 3

Your NUID:
Your Name:

Question 1 (6 points)

The Wang Financial Institute provides services on financial planning projects to its clients. Due to the rapid business expansion, it is imperative to design and implement a relational database to manage its business operations. Please design the database based on the following requirements.

- 1) Maintain client information
- 2) Manage client projects. A client may have several projects
- 3) Track consultant assignments. A consultant may work on multiple projects concurrently
- 4) Inventory all skills of consultants
- 5) Store consultant's training records. There are training sessions which consultants are required to attend.

Normalize the design to the 3rd normal form. Create the ERD in your design tool. Submit the ERD.

Question 2 (3 points)

Our data usage pattern is to review a salesperson's complete sales history frequently. Please use the embedding design technique to design a MongoDB database reflecting the data provided below.

SalesPersonID	FirstName	LastName	SalesOrderID	ProductID	Name	OrderQty	UnitPrice
281	Shu	Ito	47034	725	LL Road Frame - Red, 44	4	202
281	Shu	Ito	47034	717	HL Road Frame - Red, 62	2	781
281	Shu	Ito	47057	825	HL Mountain Rear Wheel	4	196

-- Your NUID:

-- Your Name:

-- Question 3 (3 points)

/* Using AdventureWorks2008R2, write a query to return the sales territories which have never had an order worth less than \$4. Use TotalDue of SalesOrderHeader to determine an order value.

Include the territory id, territory name and the lowest order value of the territory in the returned data.

Sort the returned data by the territory id. */

-- Question 4 (3 points)

/* Using AdventureWorks2008R2, write a query to create a report containing the highest order value and the highest sold product quantity of an order for all orders of each customer.

Include the customer id, the highest order value and the highest sold product quantity of an order for all orders of each customer columns in the returned data. Sort the report by the customer id in desc. */