

Q1 Seattle Last Digit of NUID 4, 5, 6, 7, or 8
Please include your NUID and name in all submitted files.

Question 1 (6 points)

The Wang Craft Shop is a small business that sells materials to people who want to embark on a crafting project.

From the above business scenario of the Wang Craft Shop, please design a relational database to track:

- 1) Customer's purchase (order)
- 2) Suppliers
- 3) Items stocked. Stocked items are all categorized.
- 4) The details of a category are also tracked.
- 5) Customers
- 6) Employees who process a customer's purchase (order)

Normalize the design to the 3rd normal form. Create the ERD in your design tool. Submit the ERD as an image or in the pdf format.

Question 2 (2 points)

Our data usage pattern is to review orders independently of other information about a customer, such as a customer's names. Please use the referencing design technique to design a MongoDB database reflecting the data provided below. Submit a screenshot of the created document(s).

CustomerID	FirstName	LastName	SalesOrderID	ProductID	Name	OrderQty	UnitPrice
11023	Seth	Edwards	52912	883	Short-Sleeve Classic Jersey, L	1	54
11023	Seth	Edwards	74658	922	Road Tire Tube	1	4

Submit a single sql file containing the solutions to Q3 and Q4.

-- Question 3 (4 points)

```
/* Using AdventureWorks2008R2, write a query to retrieve the
products which have been sold in all quarters of all years
as reflected by the data stored in AdventureWorks. To be more
specific, if there was any sale in a quarter, the product
was sold in that quarter.
```

```
Include the product id, number of quarters a product has been sold in,
and total sales dollar amount of the product in the returned data.
```

```
Return only the products which have been sold to more than 2000 unique
```

customers in this query.

Sort the returned data by the product id. Format the total sales as an integer. */

-- Question 4 (3 points)

/* Write a query to return the sales territory which had the lowest total sales amount. Include only the sales territories which never had an order worth more than \$120000 for this query. If there is a tie, the tie needs to be returned.

Include the territory id, territory name, highest order value, and total sales amount for the territory in the returned data. Use TotalDue of SalesOrderHeader as the order value. Format the total sales as an integer.

*/