

NUID 2nd Last Digit ending in 0 or 9
Your NUID:

-- Question 1 (6 points)

The Wang's Machinery sells machine parts online. Please design a relational database to meet the following objectives.

- 1) Maintain an inventory of machine parts for sale
- 2) Track customers
- 3) Track orders
- 4) Store invoices
- 5) Ship purchased machine parts to customer

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

-- Question 2 (2 points)

Use the referencing technique to design MongoDB documents which contain the data below. Submit the documents in JSON format.

TerritoryID	Name	SalesPersonID	FirstName	LastName
5	Southeast	274	Stephen	Jiang
5	Southeast	275	Michael	Blythe
5	Southeast	277	Jillian	Carson
5	Southeast	279	Tsvi	Reiter

-- Question 3 (2 points)

/*

Write a query to retrieve all customers who have purchased products of more than 6 unique colors.

For example, a customer has purchased the following products:

Product 1 in red
Product 2 in green
Product 3 in yellow
Product 4 in red
Product 5 in yellow

Then, the customer has purchased products of 3 unique colors.

Exclude the products which don't have a color specified.

Return the customer's id and the number of unique colors.

Sort the returned data by the number of unique colors in desc.

*/

-- Question 4 (2 points)

/* Write a query to retrieve the dates in which there was at least one order placed but no order worth more than \$1000 was placed. Use TotalDue in Sales.SalesOrderHeader as the order value. Return the "order date" and "total product quantity sold for the date" columns. Sort the returned data by the "total product quantity sold for the date" column in desc. */

-- Question 5 (3 points)

/* 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. Sort the report by the customer id in desc. */