part 1 - Join operations:

* Run an experiment comparing an equi-join and a non-equi join.

EQUI Join:

SELECT agents.agent\_name,customer.cust\_name, customer.cust\_city

FROM agents,customer

WHERE agents.working\_area=customer.cust\_city;

NON-EQUI Join:

SELECT a.ord\_num,a.ord\_amount,b.cust\_name,b.working\_area   
FROM orders a,customer b   
WHERE a.ord\_amount BETWEEN b.opening\_amt AND b.opening\_amt;

* Support a user story demonstrating the difference.

As the department supervisor Tammy, I want a count of students that earned 100 in prof. x’s calendar, so that I can evaluate student success

As dept. chair Joe, I want a count of students that earned scores betweem a 80 and 90, so that I can know which students earned the B aver

* Run an experiment comparing a join and a composite join.

SELECT a.des\_num,a.des\_date,SUM(b.ord\_amount)

FROM despatch a join orders b

on a.ord\_amount=b.ord\_amount  
and a.ord\_num=b.ord\_num

Where a.des\_num = ‘1000117’

GROUP BYE a.des\_num,a.des\_date,b.ord\_amount;

* Support a user story demonstrating the difference.

As Jane the assistant controller, I want to verify that a client’s order was shipped, so that we continue to provide a positive customer experience

* Create and execute a user story demonstrating a cross join.

As the sales rep Kathy, I want to see a catalog of car models and colors we sell, so that I can showcase the variety to a client

* Run a full join to find missing match values.

Use exam ans

part 2 – Hints fyi - <https://www.sentryone.com/plan-explorer>

* Run a series of experiments with an inner and an outer join using loop, hash, merge.

<https://docs.microsoft.com/en-us/sql/t-sql/queries/hints-transact-sql-join?view=sql-server-2017>

* Run an experiment with a join query where one table is on the azure server. Run the join using remote and not using remote.

<https://www.mssqltips.com/sqlservertip/2765/revisit-your-use-of-the-sql-server-remote-join-hint/>

part 3 - reporting

* Compare execution plans and write a descriptive narrative explaining the performance differences.