Queries

1. Retrieve the US state, population, income, and average household size that have a household size of 3 or more.
   1. This query will make use of the household entity and the population entity as it requires a population size, an average income, and the average household size for a state.

SELECT rt.name\_of\_region, ps.`Total Population`, ibs.HouseholdIncome, hs.AverageHouseholdSize

FROM population\_state as ps Join income\_by\_state as ibs on ps.RegionID = ibs.RegionID

Join householdsize\_state as hs on hs.RegionID = ps.RegionID

Join region\_table as rt on rt.ID = ps.RegionID

where hs.AverageHouseholdSize >= 3

1. Retrieve the states, avg income, and poverty percent level of the top 10 US states with a high school educational level of 30% or more.
   1. This query requires the Household and the Poverty entity to access the poverty level and the average income for each state.

SELECT rt.name\_of\_region, ibs.HouseholdIncome, p.`Poverty\_Percent\_All Ages 2022`, es.High\_school\_graduate

FROM poverty\_2022 as p Join income\_by\_state as ibs on p.RegionID = ibs.RegionID

join eductation\_state as es on p.RegionID = es.region\_ID

join region\_table as rt on rt.ID = p.RegionID

where es.High\_school\_graduate > 30

ORDER BY p.`Poverty\_Percent\_All Ages 2022` DESC

LIMIT 10;

1. Retrieve the divorced and married percent for each US state with the biggest difference between marriage being high and divorce being low.
   1. This query will only make use of the Marraige\_status entity and the Married and Divorced attributes.

SELECT rt.name\_of\_region, ms.Married, ms.Divorced

FROM marriagestats\_state as ms join region\_table as rt on ms.RegionID = rt.ID

ORDER BY ABS(ms.Married - ms.Divorced) DESC;

1. Retrieve the income and the name of states with households who live below the average of the usa income.

SELECT isb.HouseholdIncome, rt.name\_of\_region

FROM income\_by\_state as isb join region\_table as rt on rt.ID = isb.RegionID,

(select avg(`Median income $`) as income from householdsize\_income\_usa) as avgincome

Where isb.HouseholdIncome < avgincome.income

order by isb.HouseholdIncome desc

1. Ben has always had the dream to settle down, getting married, and having children. Now that he has graduated from college and has a bright future ahead of him, he wants to chase his dream. Ben wants to relocate to a state that has a high avg income level, with a high probability of Married status. Find the top 5 ideal states for Ben. The top 5 ideal states that have a high avg income level, with a high probability of Married status.
   1. This query will use the Household, Population, and Marriage\_status to find one state that fits the requirements

SELECT rt.name\_of\_region, ibs.HouseholdIncome, ms.Married

FROM income\_by\_state as ibs join marriagestats\_state as ms on ibs.RegionID = ms.RegionID

Join region\_table as rt on rt.ID = ibs.RegionID

ORDER BY ms.Married DESC, ibs.HouseholdIncome DESC

LIMIT 5

1. Lisa is an independent woman with a successful career. She doesn’t want to get married but rather is interested in helping children that have low-income backgrounds. She wants to relocate to a state that has one of the 10 smallest populations and has a high poverty level. Find the ideal state for Lisa.
   1. This query will involve the Poverty and Population entity to find Lisa a state that matches her requirements. It satisfies the needs of the application by performing calculations on the population size.

SELECT subquery.name\_of\_region, subquery.`Total Population`, subquery.max\_poverty\_percent

FROM (

SELECT rt.name\_of\_region, ps.`Total Population`,

(SELECT MAX(`Poverty\_Percent\_All Ages 2022`) FROM poverty\_2022 WHERE RegionID = ps.RegionID) AS max\_poverty\_percent

FROM population\_state ps

JOIN region\_table rt ON rt.ID = ps.RegionID

ORDER BY `Total Population` ASC

LIMIT 10

) AS subquery

ORDER BY subquery.max\_poverty\_percent DESC

LIMIT 1

1. Ava is generally curious and wants to know what is the worst state statistically ordered off by lowest income, and in what percent of each state is its divorce rate and poverty rate over or below the average of the us.

SELECT rt.name\_of\_region, ibs.HouseholdIncome, (p2.`Poverty\_Percent\_All Ages 2022`/avgPoverty.Poverty) \* 100 -100 as `poverty % more compared to avg`, (ms.Divorced/avgDivorce.divorces) \*100 -100 as `divorce % more compared to avg`

FROM income\_by\_state ibs join poverty\_2022 p2 on ibs.RegionID = p2.RegionID

Join region\_table as rt on rt.ID = ibs.RegionID

Join marriagestats\_state as ms on ms.RegionID = ibs.RegionID,

(select avg(p2.`Poverty\_Percent\_All Ages 2022`) as Poverty from poverty\_2022 p2) as avgPoverty,

(select avg(ms.Divorced) as divorces from marriagestats\_state ms) as avgDivorce

where p2.`Poverty\_Percent\_All Ages 2022` > avgPoverty.Poverty

ORDER By ibs.HouseholdIncome ASC

1. Which race has the highest mean income? Get the total size/number of people in the group that are married, single, widowed and divorced.

Select R.Race, aimu.type, aimu.total, aimu.`Single (never married)`, aimu.married, aimu.Widowed, aimu.Divorced

From race\_table as R Join allrace\_income\_marriage\_usa as aimu on R.ID = aimu.RaceID

Where aimu.total = (Select Max(aimu.total)

From allrace\_income\_marriage\_usa as aimu

Where type = "Mean income (dollars)");

1. Get the mean income and income per person for households with a size of 4 or less, as well as the average income for these household sizes.

Select hiu.`household size`, hiu.`Mean income $`, hiu.`Income per family member $`, (Select Avg(hiu.`Mean income $`)

from householdsize\_income\_usa as hiu

where hiu.`household size` IN ('Two people', 'Three people', 'Four people')

) as avgmean

From householdsize\_income\_usa as hiu

WHERE hiu.`household size` IN ('Two people', 'Three people', 'Four people')

1. Lotanna is a middle school student planning out her future education and career plans. However, she’s not certain as to whether it’s worth it to get a graduate’s degree. Lotanna wants to know the difference in income between an associate’s, a bachelor’s, and a graduate’s degree.

Select ( Select (Select eiu.`Median income Value (Dol.)` as Bach

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Where en.Name = "Bachelors\_degree") -

(Select eiu.`Median income Value (Dol.)` as Bach

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Where en.Name = "Associates\_degree")) as Bach\_Asso\_Diff,

( Select (Select eiu.`Median income Value (Dol.)` as Bach

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Where en.Name = "Graduate\_or\_professional\_degree") -

(Select eiu.`Median income Value (Dol.)` as Bach

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Where en.Name = "Bachelors\_degree")) as Grad\_Bach\_Diff,

( Select (Select eiu.`Median income Value (Dol.)` as Bach

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Where en.Name = "Graduate\_or\_professional\_degree") -

(Select eiu.`Median income Value (Dol.)` as Bach

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Where en.Name = "Associates\_degree")) as Grad\_Asso\_Diff

From equcation\_income\_usa as eiu join education\_nametable as en on eiu.education\_ID = en.ID

Limit 1

1. Get the states that have a graduate\_degree percentage of 10% or more and a bachelors percentage of 20% or more.

SELECT en.`name\_of\_region`

FROM eductation\_state as es join region\_table as en on es.region\_ID = en.ID

WHERE es.`Graduate\_or\_professional\_degree` >= 10 and es.`Bachelors\_degree` >= 20;

1. Get the poverty estimates and state names for Washington State, Utah, Hawaii, and Nebraska.

SELECT p2.`Poverty\_Estimate\_ All Ages 2022` as Poverty\_estimate, rt.name\_of\_region

FROM poverty\_2022 as p2 join region\_table as rt on p2.RegionID = rt.ID

WHERE rt.`name\_of\_region` IN ('Washington', 'Utah', 'Nebraska', 'Hawaii')

1. Retrieve the average total income for all races.

SELECT avg(aimu.total)

FROM allrace\_income\_marriage\_usa as aimu

WHERE aimu.type = "total"