**ASG4: Grouping and Subqueries**

**Save file as ASG4\_YourLastName**

**Each Question 1 point**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Name: Jasiya Thompson**

**NetID: jdt97**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**AirBNB Database**

AirBnb collects data about listings and hosts for all major cities. They want to analyze their existing data to better understand the Chicago market, and determine if they can make changes or start new projects. Use queries to answer the following questions. Please include the query you used, as well as the answer to the question (if applicable).

1.  First, AirBnb wants to determine which neighborhoods have the most listings so they know where to focus their attention. Determine the number of listings in each neighborhood and order them in descending order.

SELECT Neighborhood, COUNT(Neighborhood) AS NeighborhoodCount

FROM PROPERTYINFO

GROUP BY Neighborhood

ORDER BY COUNT(Neighborhood) DESC;

2.  The University of Chicago’s graduation is soon, and AirBnb needs to make sure there are enough listings for all the parents and relatives coming to town. How many listings are there in Hyde Park Neighborhood?

SELECT Neighborhood, COUNT(Neighborhood)

FROM PROPERTYINFO

WHERE Neighborhood="Hyde Park"

GROUP BY Neighborhood;

3.  AirBnb wants to incentivize hosts to get higher ratings on their listings. To do this, they launched a program where, if a listing gets a 5 star review during a certain week, the listing will be entered into a lottery for a $1000 bonus. Property 1019 was drawn in the lottery. Determine the host name for this property.

SELECT HostName

FROM HOSTINFO

WHERE HostID IN (SELECT HostID

FROM PROPERTYINFO

WHERE PropertyID="1019");

4.  What is the most common host name, and how many hosts are named that?

SELECT Top 1 HostName,COUNT(HostName) AS HostNameCount

FROM HOSTINFO

GROUP BY HostName

ORDER BY COUNT(HostName) DESC;

5.  AirBnb lists “Bungalow” as a house type, but is considering grouping that term in with another house type due to too few listings. How many bungalows are listed?

SELECT PropertyTypeID, COUNT(\*) AS Count

FROM PROPERTYINFO

WHERE PropertyTypeID IN (SELECT PropertyTypeID

FROM PROPERTYTYPE

WHERE PropertyDescription="Bungalow")

GROUP BY PropertyTypeID;

6. AirBnb wants to launch an ad for a certain property type, and needs to determine which one to use. They want to use the one with the most listings to attract the most potential customers. Which property type has the most listings? (Find property name, not ID)

SELECT TOP 1 PROPERTYTYPE.PropertyDescription,

COUNT(PROPERTYINFO.PropertyTypeID)

FROM PROPERTYTYPE INNER JOIN PROPERTYINFO

ON PROPERTYTYPE.PropertyTypeID=PROPERTYINFO.PropertyTypeID

GROUP BY PROPERTYTYPE.PropertyDescription

ORDER BY COUNT(PROPERTYINFO.PropertyTypeID) DESC;

7.  AirBnb then decided that it would rather advertise for a specific area of Chicago rather than a specific property type. Which zip code has the most properties?

SELECT TOP 1 PROPERTYINFO.PropertyZipCode, Count(PROPERTYINFO.PropertyZipCode) AS CountOfPropertyZipCode

FROM PROPERTYINFO

GROUP BY PROPERTYINFO.PropertyZipCode

ORDER BY Count(PROPERTYINFO.PropertyZipCode) DESC;

8. You need to rent a property quickly, and are interested in property 1500 (PropertyID 1500). Given the time constraint, you need a host that will answer quickly. What is the host’s average response time for property 1500?

SELECT HostID, AVG(HostResponseRate) AS AVGResponseRate

FROM HOSTINFO

WHERE HostID IN (SELECT HostID

FROM PROPERTYINFO

WHERE PropertyID="1500")

GROUP BY HostID;

9. How many properties have “strict” as the cancellation policy?

SELECT COUNT(\*)

FROM PROPERTYINFO

WHERE ConstraintID IN (SELECT ConstraintID

FROM RENTALCONSTRAINTS

WHERE CancellationPolicy="strict");

10. We know there is only one property that monthly price is $4699. What is the host name for that property?

SELECT HostName

FROM HOSTINFO

WHERE HostID IN (SELECT HostID

FROM PRICE

WHERE MonthlyPrice=4699);