**1. How many customers have more than one property serviced by JasperGreen?**

* **Query:**

**USE JasperGreen;**

**SELECT p.crew\_chief as 'Chief ID', COUNT(distinct p.provision\_id) AS '# of Services', CONCAT(emp\_first\_name, " ", emp\_last\_name) as 'Employee Name'**

**FROM provided\_service p join employee e**

**ON p.crew\_chief = e.crew\_chief**

**GROUP BY 1**

**ORDER BY COUNT(p.provision\_id) DESC;**

* **Solution**

|  |  |  |
| --- | --- | --- |
| **Customers w/ mult. properties serviced** | | |
| **137** |  |  |  |

**2. Which crew chief has provided the most services?**

* **Query:**

**SELECT p.crew\_chief as 'Chief ID', COUNT(distinct p.provision\_id) AS '# of Services', CONCAT(emp\_first\_name, " ", emp\_last\_name) as 'Employee Name'**

**FROM provided\_service p join employee e**

**ON p.crew\_chief = e.crew\_chief**

**GROUP BY 1**

**ORDER BY COUNT(p.provision\_id) DESC;**

* **Solution**

|  |  |  |
| --- | --- | --- |
| **Chief ID** | **# Of Services** | **Employee Name** |
| **1** | **14353** | **Martina Hurst** |
| **5** | **13100** | **Violet Vega** |
| **3** | **12986** | **Seamus Jones** |
| **8** | **12560** | **Arnold Jones** |
| **11** | **9737** | **Thad Jones** |
| **19** | **5681** | **Rosalind Carey** |
| **14** | **5621** | **Francine Hartman** |

**3. What is the least popular service offered by JasperGreen (i.e., the one that has been contracted the least)? contracted**

* **Query**

**SELECT s.service\_ID as 'Service ID', service\_description AS 'Service Description', COUNT(c.service\_id) as '# of Contracted Services'**

**FROM service s LEFT OUTER JOIN contracted\_service c**

**ON s.service\_id = c.service\_Id**

**GROUP BY c.service\_ID**

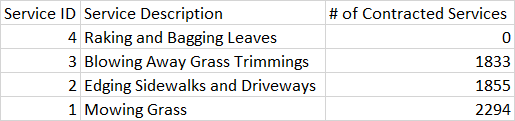
**HAVING COUNT(c.service\_ID) =**

**(SELECT COUNT(c.service\_ID) FROM contracted\_service**

**GROUP BY c.service\_iD)**

**ORDER BY COUNT(c.service\_ID) ASC;**

* **Solution**

****

**4. What is the the name(s) of the customer(s) that has the most properties serviced by**

**JasperGreen?**

* **Query:**

**SELECT COUNT(p.CUST\_ID) AS '# of Services', p.cust\_id AS 'Customer ID', CONCAT(cust\_first\_name, " ", cust\_last\_name) AS 'Customer Name'**

**FROM provided\_service p JOIN customer c**

**ON p.cust\_id = c.cust\_id**

**GROUP BY 2,3**

**ORDER BY COUNT(p.cust\_id) DESC**

**LIMIT 2;**

* **Solution:**

|  |  |  |
| --- | --- | --- |
| **# of Services** | **Customer ID** | **Customer Name** |
| **627** | **144** | **Eula Davenport** |
| **576** | **27** | **Jasper Mcclain** |

**5. What is the name of the customer(s) with the highest average property size?**

* **Query:**

**SELECT c.cust\_id as 'Customer ID', AVG(property\_size) as 'Average Property Size', CONCAT(cust\_first\_name, ' ', cust\_last\_name) as 'Customer Name'**

**FROM customer c JOIN property p**

**ON c.cust\_id = p.cust\_id**

**GROUP BY c.cust\_id**

**ORDER BY property\_size DESC**

**LIMIT 3;**

* **Solution**

|  |  |  |
| --- | --- | --- |
| **Customer ID** | **Average Property Size** | **Customer Name** |
| **91** | **9900** | **Diana Pierce** |
| **134** | **9800** | **Elsa Gaines** |
| **43** | **9500** | **Blair Joyce** |

**6. Which crew chief was the least utilized in 2013?**

* **Query:**

**SELECT p.CREW\_CHIEF as 'Crew Chief ID', CONCAT(emp\_first\_name, " ",emp\_last\_name) AS "Employee Name", COUNT(p.CREW\_CHIEF) AS 'Crew Chief Utilization'**

**FROM employee e JOIN provided\_service p**

**ON e.crew\_chief = p.crew\_chief**

**GROUP BY p.CREW\_CHIEF**

**HAVING (select count(crew\_chief) FROM provided\_service**

**WHERE YEAR (provision\_date) = 2013)**

**ORDER BY COUNT(p.crew\_chief) ASC**

**LIMIT 1;**

* **Solution**

|  |  |  |
| --- | --- | --- |
| * + **Crew Chief ID** | * + **Employee Name** | * + **Crew Chief Utilization** |
| * + **14** | * + **Paul Savage** | * + **16863** |

**7. Jasper is considering adding shrubbery trimming as a service; how many of his customers in 2015 owned properties that contain shrubs?**

* **SELECT COUNT(DISTINCT p.cust\_id) AS '# Of Customers W/ Shrubs', property\_details AS 'Property Type', YEAR(provision\_date) as 'Year of Service'**
* **FROM provided\_service p JOIN property r**
* **WHERE p.cust\_id = r.cust\_id**
* **and YEAR(p.provision\_date) = 2015**
* **GROUP BY 2, 3**
* **HAVING r.property\_details = 'Shrubs';**
* **Solution**

|  |  |  |
| --- | --- | --- |
| **# of Customers w/ Shrubs** | **Property Type:** | **Year** |
| **33** | **Shrubs** | **2015** |

**8. How many of JasperGreen’s customers have come via referrals?**

* **Query:**

**SELECT COUNT(cust\_referred\_by) as 'number of referred customers'**

**FROM customer**

**WHERE cust\_referred\_by != '' OR cust\_referred\_by IS NULL;**

* **Solution**

|  |
| --- |
| **number of referred customers** |
| **61** |

**9. Which customers have maxed out their referral credit?**

* **Query:**

**SELECT c.cust\_id as 'Customer ID', CONCAT(c.cust\_First\_Name,' ', c.cust\_Last\_Name) AS 'Customer Name', count(n.cust\_ID) as '# Customers Referred'**

**FROM customer c JOIN customer n**

**ON c.cust\_ID = n.cust\_referred\_by**

**GROUP BY c.cust\_ID, c.Cust\_Last\_Name**

**HAVING COUNT(n.cust\_referred\_by) = 3;**

* **Solution**

|  |  |  |
| --- | --- | --- |
| **Customer ID** | **Customer Name** | **# Customers Referred** |
| **113** | **Fanny Turner** | **3** |
| **184** | **Liz Walker** | **3** |

**10. Which crew chief provided the most services to properties that have trees in 2014?**

* **Query:**

**SELECT crew\_chief AS 'Crew Chief', COUNT(crew\_chief) AS '# Of Properties Serviced w/ Trees', property\_details AS 'Property Type', YEAR(PROVISION\_DATE) as 'Year of Service'**

**FROM property r JOIN provided\_service p**

**WHERE r.CUST\_ID = p.CUST\_ID**

**AND r.property\_details LIKE '%tree%'**

**AND YEAR(p.provision\_date) = 2014**

**GROUP BY 1**

**ORDER BY 2 DESC**

**LIMIT 1;**

* **Solution:**

|  |  |  |  |
| --- | --- | --- | --- |
| **# Crew Chief** | **# Of Properties Serviced w/ Trees** | **Property Type** | **Year of Service** |
| **8** | **2260** | **4 trees** | **2014** |

**11. Assuming perfect customer retention (I know), how many new customers did JasperGreen have in 2012?**

* **Query:**

**SELECT COUNT(DISTINCT cust\_id) AS '# New Customers', year(provision\_date) as 'Year Serviced'**

**FROM provided\_service**

**WHERE year(provision\_date) = 2012**

**and cust\_id NOT IN**

**(SELECT DISTINCT cust\_id**

**FROM provided\_service WHERE YEAR(provision\_date) BETWEEN 2005 AND 2011);**

* **Solution**

|  |  |
| --- | --- |
| **# of New Customers** | **Year Serviced** |
| **37** | **2012** |

**12. How much money did JasperGreen earn from payments made in 2011?**

* **Query:**

**SELECT SUM(CAST(SUBSTR(payment\_amount,2) AS DECIMAL(12,2))) as 'Total Money Earned in 2011', year(payment\_date) as 'Year of Payment'**

**FROM payment**

**WHERE YEAR(payment\_date) = 2011;**

* **Solution**

|  |  |
| --- | --- |
| **Total Money Earned in 2011** | **Year of Payment** |
| **124945.00** | **2011** |

**13. How many properties were contracted to be serviced on a monthly basis in 2015?**

* **Query:**

**SELECT COUNT(c.frequency) AS ' # Of Properties Serviced Monthly', year(provision\_date) as 'Year of Service'**

**FROM contracted\_service c join provided\_service p**

**ON c.contract\_id = p.contract\_id**

**WHERE c.frequency = 'Monthly'**

**AND YEAR(provision\_date) = 2015;**

* **Solution**

|  |  |
| --- | --- |
| **# Of Properties Serviced Monthly** | **Year of Service** |
| **1458** | **2015** |

**14. Of the ZIP codes serviced by JasperGreen, which contain(s) the fewest number of customer properties?**

* **Query:**

**SELECT property\_zip AS 'Property Zip Code', COUNT(property\_zip) as 'Number of Properties w/ Zip’**

**FROM property**

**GROUP BY property\_zip**

**ORDER BY COUNT(property\_zip) ASC**

**LIMIT 2;**

* **Solution**

|  |  |
| --- | --- |
| **Property ZIP Code** | **# of Properties w/ ZIP** |
| **77844** | **70** |

**15. What is the name of the customer(s) that has paid the most money to JasperGreen over the lifetime of the company?**

* **Query:**

**SELECT c.cust\_id, CONCAT(c.cust\_first\_name," ", c.cust\_last\_name) AS 'Customer Name', SUM(CAST(SUBSTR(payment\_amount,2) AS DECIMAL(12,2))) AS 'Total Amount Paid'**

**FROM customer c JOIN payment p**

**ON c.cust\_id = p.cust\_id**

**GROUP BY 1,2**

**ORDER BY 3 DESC**

**LIMIT 1;**

* **Solution**

|  |  |  |
| --- | --- | --- |
| **Customer ID** | **Customer Name** | **Total Amount Paid** |
| **27** | **Jasper Mcclain** | **$12,070.00** |