

Final Report

Group 7 – CNIT 372 Project

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Background

Our selected application is regarding an ice cream shop chain called Frostbite Ice Cream. Frostbite Ice Cream is an up-and-coming ice cream chain with just a handful of locations. Since the shop is predicted to grow, the goal of the application is to keep a better log of the increasing customers and orders across these various locations.

We will be working with a database which is going to hold data on each of the ice cream shop locations. Specifically, it is going to store important data such as customer information, orders and their details, and products. This database is needed because it will help to provide clarity and accuracy for the ice cream shop when managing and fulfilling customer orders, while also allowing the business to get answers to questions that can provide value to the business.

Database Description

There are seven tables within the database. Those tables include the customers, locations, orders, orderlineitem, products, containers, and flavors.

ERD

Below is an ERD to show an overview of the tables, their columns, data types, etc. and the table relationships.

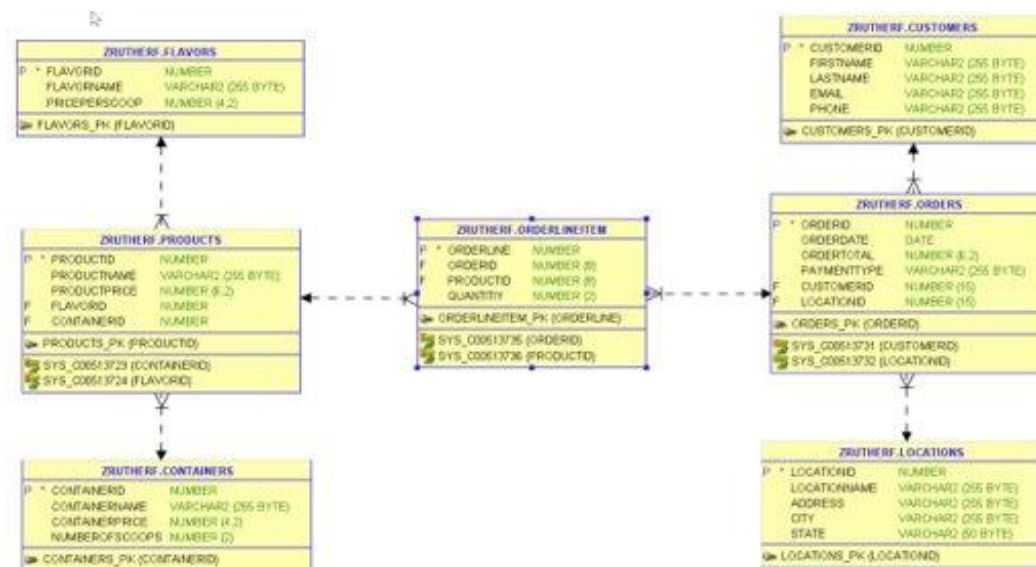


Figure 1: ERD of Frostbite Ice Cream database

Locations Table

The LOCATIONS table holds data on the various Frostbite Ice Cream locations such as their name, address, city, and state. There are three total locations for Frostbite Ice Cream.

Table Relationships: A LOCATION can have many ORDERS.

LOCATION	Data Type
LocationID	NUMBER
Name	VARCHAR2(255)
Address	VARCHAR2(255)
City	VARCHAR2(255)
State	VARCHAR2(50)

Table 1: Columns and datatypes for the LOCATIONS table

Customers Table

The CUSTOMERS table holds data on the customers such as their names and phone number.

Table Relationships: A CUSTOMER can have many ORDERS.

CUSTOMER	Data Type
CustomerID	NUMBER
FirstName	VARCHAR2(255)
LastName	VARCHAR2(255)
Email	VARCHAR2(255)
Phone	VARCHAR2(255)

Table 2: Columns and datatypes for the CUSTOMERS table

Orders Table

The ORDERS table holds data on each order placed by a customer at one of the locations. It holds data on the date the order was placed, the order total, and the payment used.

Table Relationships: An ORDER has 1 LOCATION and 1 CUSTOMER. It can include many ORDERLINEITEMS.

ORDERS	Data Type
OrderID	NUMBER
OrderDate	DATE
OrderTotal	NUMBER(6,2)
PaymentType	VARCHAR2(255)
CustomerID	NUMBER(15)
LocationID	NUMBER(15)

Table 3: Columns and datatypes for the ORDERS table

OrderLineItem Table

The ORDERLINEITEM holds data on each line item in an order, or more specifically the product and quantity.

Table Relationships: An ORDERLINEITEM is a part of 1 ORDER and contains 1 PRODUCT.

ORDERLINEITEM	Data Type
OrderLine	NUMBER
OrderID	VARCHAR2(255)
ProductID	VARCHAR2(255)
Quantity	VARCHAR2(255)

Table 4: Columns and datatypes for the ORDERLINEITEM table

Products Table

The PRODUCTS table holds data on the products created from the various combinations of containers and ice cream flavors. Each product has a name and price, as well as a flavor and container that make up that product.

Table Relationships: A product can be found in many ORDERLINEITEMS and contains 1 CONTAINER and 1 FLAVOR.

PRODUCTS	Data Type
ProductID	NUMBER
ProductName	VARCHAR2(255)
ProductPrice	VARCHAR2(255)
FlavorID	VARCHAR2(255)
ContainerID	VARCHAR2(50)

Table 5: Columns and datatypes for the PRODUCTS table

Flavors Table

The FLAVORS table holds data on each of the ice cream flavors Frostbite Ice Cream carries. This includes info about the name and price per scoop of each flavor.

Table Relationships: A FLAVOR can be a part of many PRODUCTS.

FLAVORS	Data Type
FlavorID	NUMBER
FlavorName	VARCHAR2(255)
PricePerScoop	NUMBER(4,2)

Table 6: Columns and datatypes for the FLAVORS table

Containers Table

The CONTAINERS table has data for the containers the business provides for sale. This includes the container name, price, and number of scoops it contains.

Table Relationships: A CONTAINER can be a part of many PRODUCTS.

CONTAINERS	Data Type
ContainerID	NUMBER
ContainerName	VARCHAR2(255)
ContainerPrice	NUMBER(4,2)
NumberOfScoops	NUMBER(2)

Table 7: Columns and datatypes for the CONTAINERS table

Questions & Solutions

Below is detailed information regarding the 11 questions answered regarding the Frostbite Ice Cream database. Each answer to these questions offers a unique business value to the company.

Package

The questions answered were all placed in a package called `Frostbite_IceCream_Questions`. From this package, you can execute any of the individual procedures to obtain an individual answer, or you are able to execute a procedure called `Print_Answers_To_All_Questions`, which prints all answers to the output.

Q1 - Which shop is the most popular during the summer of 2022 (June-September)? By how much from the lowest shop?

Business Value:

With this data the shop is doing the best can be rewarded and the company might not need to spend as much on advertising on that location.

Code Used:

Tables Used: Locations and Orders

```
create or replace procedure outputinglocationmax
as
    v_locationName varchar2(200);
    v_Countmax number;
    v_difference number;
    v_countmin number;

begin
    select loc.locationname,count(ords.locationid) into v_locationName,v_Countmax
    from orders ords
    inner join locations loc
        on loc.locationid=ords.locationid
    where ords.orderdate between to_date('01-06-22','DD-MM-YY') and to_date('31-08-22','DD-MM-YY')
    group by ords.locationid,loc.locationname
    fetch first 1 row only;

    select min(count(ords.locationid)) into v_countmin
    from orders ords
    where ords.orderdate between to_date('01-06-22','DD-MM-YY') and to_date('31-08-22','DD-MM-YY')
    group by ords.locationid
    ;
    select
        v_countmax-v_countmin into v_difference
    from dual;

    dbms_output.put_line(v_locationName||' '||v_Countmax);
    dbms_output.put_line('Difference between the max and min is:'||v_difference);

end;
/
exec outputinglocationmax();
```

Answer & Query Results

Purdue Campus - PMU 7

Difference between the max and min is: 5

Q2 – Which location is the least popular during the Summer (June-September)?

Business Value:

The company needs to focus on this shop to ensure they can stop it from struggling and start making money.

Code Used:

Tables Used: Locations and Orders

```
create or replace procedure outputtinglocationmin
as
    v_locationName varchar2(200);
    v_countmin number;
begin
    select loc.locationname,count(ords.locationid) into v_locationName,v_Countmin
    from orders ords
    inner join locations loc
        on loc.locationid=ords.locationid
    where ords.orderdate between to_date('01-06-22','DD-MM-YY') and to_date('31-08-22','DD-MM-YY')
    group by ords.locationid,loc.locationname
    order by count(ords.locationid) asc
    fetch first 1 row only;

    dbms_output.put_line(v_locationName||' '||v_Countmin);
end;
/
exec outputtinglocationmin();
```

Answer & Query Results

Ocean Beach - Outer Sunset 2

Q3 – Which type of cone is the most popular and how much do they cost in total?

Business Value:

This allows the company to know what cones will be the most popular so they could bulk buy them if they wanted to save some money

Code Used:

Tables Used: Containers, OrderLineItem, Products

```
create or replace procedure ConeProcedure
as
    v_containerprice number;
    v_containername varchar2(200);
begin
    select sum(cont.CONTAINERPRICE*oli.Quantity), cont.containername into
    v_containerprice, v_containername
    from products prod
    inner join orderlineitem oli
        on prod.productid=oli.productid
    inner join containers cont
        on cont.containerid=prod.containerid
    group by cont.containername
    order by sum(cont.CONTAINERPRICE*oli.Quantity) desc
    fetch first 1 rows only;

    dbms_output.put_line(v_containerprice || ' ' || v_containername);
end;
/
exec ConeProcedure();
```

Answer & Query Results

31.8 Gallon To-Go

Q4 – How do sales differ between the weekdays and the weekend for a given week?

Business Value:

This question can help the business compare between weekday and weekend sales and decide how to allocate resources accordingly or even when to focus schedule events, promotions, etc.

Code Used:

To answer this question, a PL/SQL procedure was created called:

Get_Difference_TotalSales_Week_Weekend

It takes in an IN parameter called p_week_start_date_monday, which is the date for the Monday starting the week/weekend to be analyzed. Using that parameter, the sum of OrderTotal is calculated for the orders placed between the specified dates and printed to the screen. Below is the code used.

Tables Used: ORDERS

```
CREATE OR REPLACE PROCEDURE Get_Difference_TotalSales_Week_Weekend
(p_week_start_date_monday IN DATE)
AS
    v_monday_date DATE;
    v_week_total NUMBER(6,2);
    v_weekend_total NUMBER(6,2);
BEGIN
    v_monday_date := p_week_start_date_monday;

    IF TRIM(TO_CHAR(v_monday_date, 'Day')) = 'Monday' THEN
        SELECT SUM(ORDERTOTAL) into v_week_total
        FROM ORDERS
        WHERE ORDERDATE BETWEEN v_monday_date AND (v_monday_date + 4);

        SELECT SUM(ORDERTOTAL) into v_weekend_total
        FROM ORDERS
        WHERE ORDERDATE BETWEEN (v_monday_date + 5) AND (v_monday_date + 6);

        IF v_week_total > v_weekend_total THEN
            DBMS_OUTPUT.PUT_LINE('$' || TO_CHAR(v_week_total - v_weekend_total) || ' more was made
during the week than during the weekend.');
```

```
            ELIF v_weekend_total > v_week_total THEN
                DBMS_OUTPUT.PUT_LINE('$' || TO_CHAR(v_weekend_total - v_week_total) || ' more was made
during the weekend during than the week.');
```

```
            ELSE
                DBMS_OUTPUT.PUT_LINE('The same was made during the week and weekend.');
```

```
            END IF;

            DBMS_OUTPUT.PUT_LINE('');
            DBMS_OUTPUT.PUT_LINE('Total Week Sales');
            DBMS_OUTPUT.PUT_LINE('-----');
            DBMS_OUTPUT.PUT_LINE('$' || v_week_total);
            DBMS_OUTPUT.PUT_LINE('');
            DBMS_OUTPUT.PUT_LINE('Total Weekend Sales');
            DBMS_OUTPUT.PUT_LINE('-----');
            DBMS_OUTPUT.PUT_LINE('$' || v_weekend_total);
        ELSE
            RAISE_APPLICATION_ERROR (-20000, 'Ensure the week start date you entered is a Monday!');
```

```
        END IF;
    END Get_Difference_TotalSales_Week_Weekend;
```

Answer & Query Results

Using the Monday date of '03-MAY-2021', the results for that week and weekend sales is shown below. Based on the results, we can deduce that given this specific week, more profit was made on the weekend, possibly due to customers not working, not in school, etc.

\$15.97 more was made during the weekend than the week.

Total Week Sales

\$15.4

Total Weekend Sales

\$31.37

Q5 – Who was the top customer at each of the locations?

Business Value:

This question can help the business if they want to start a loyalty campaign and figure out which customer to feature or give a discount to.

Code Used:

To answer this question, two PL/SQL procedures were created called:

Get_Top_Yearly_Customers_EachLocation and **Get_Top_Yearly_Customers_AtLocation**

The first procedure concerns getting a cursor that points to all locations. Then while looping through all locations, the second procedure is executed, which takes in an individual LocationID. Within this later procedure, the top customer is determined by the max payment given in the past and their name printed to the screen. Below is the code used.

Tables Used: CUSTOMERS, ORDERS, LOCATION

```
CREATE OR REPLACE PROCEDURE Get_Top_Yearly_Customers_AtLocation
(p_location_id IN LOCATIONS.LOCATIONID%TYPE)
AS
    CURSOR customer_top_order_total
    IS (SELECT CUSTOMERID
        FROM ORDERS
        WHERE LOCATIONID = p_location_id
        GROUP BY CUSTOMERID
        HAVING SUM(ORDERTOTAL) = (SELECT MAX(SUM(ORDERTOTAL))
                                FROM ORDERS
                                WHERE LOCATIONID = p_location_id
                                GROUP BY CUSTOMERID));

    current_top_customer customer_top_order_total%ROWTYPE;

    current_top_customer_name VARCHAR2(100);
    current_top_customer_total NUMBER;
BEGIN
    FOR current_top_customer IN customer_top_order_total LOOP
        SELECT FIRSTNAME || ' ' || LASTNAME into current_top_customer_name
        FROM CUSTOMERS
        WHERE CUSTOMERID = current_top_customer.CUSTOMERID;

        DBMS_OUTPUT.PUT_LINE(current_top_customer_name);
    END LOOP;
    DBMS_OUTPUT.PUT_LINE('');
END Get_Top_Yearly_Customers_AtLocation;

CREATE OR REPLACE PROCEDURE Get_Top_Yearly_Customers_EachLocation
AS
    CURSOR all_locations
    IS (SELECT * FROM LOCATIONS);

    current_location all_locations%ROWTYPE;
BEGIN
    FOR current_location IN all_locations LOOP
        DBMS_OUTPUT.PUT_LINE(current_location.locationname);
        DBMS_OUTPUT.PUT_LINE('-----');
        Get_Top_Yearly_Customers_AtLocation(current_location.locationid);
    END LOOP;
```

```
END Get_Top_Yearly_Customers_EachLocation;
```

Answer & Query Results

After executing the procedure, the top customers at each location are shown below. With this answer, we can even go beyond and display each customer's contact information so as to properly reward them for their loyalty.

Purdue Campus - PMU

Courtney Lawrence

Chicago Loop

Dolan Baxter

Ocean Beach - Outer Sunset

Reagan Puckett

Q6 – What are the top two least ordered flavors from each location?

Business Value:

This question can help the business decide which flavors are least enjoyed by customers and which to discontinue/drop to make room for future flavors.

Code Used:

To answer this question, two PL/SQL procedures were created called:

Top_2_Least_Ordered_Flavors_EachLocation and **Get_Top_2_LeastOrdered_AtLocation**

The first procedure concerns getting a cursor that points to all locations. Then while looping through all locations, the second procedure is executed, which takes in an individual LocationID. Within this later procedure, the least ordered flavors are calculated by selecting orders placed in that location and summing the quantity of products ordered and extracting the flavors from those. Below is the code used.

Tables Used: FLAVORS, PRODUCTS, ORDERLINEITEM, ORDERS, LOCATIONS

```
CREATE OR REPLACE PROCEDURE Get_Top_2_LeastOrdered_AtLocation
(p_location_id IN LOCATIONS.LOCATIONID%TYPE)
AS
    CURSOR worst_flavors
    IS (SELECT FLAVORNAME
        FROM FLAVORS
        WHERE FLAVORID IN (SELECT FLAVORID
                           FROM (SELECT FLAVORID, SUM(QUANTITY)
                                FROM PRODUCTS P
                                INNER JOIN ORDERLINEITEM OLI
                                ON P.PRODUCTID = OLI.PRODUCTID
                                WHERE OLI.PRODUCTID IN (SELECT PRODUCTID
                                                         FROM ORDERLINEITEM OLI
                                                         INNER JOIN ORDERS O
                                                         ON OLI.ORDERID = O.ORDERID
                                                         WHERE LOCATIONID = p_location_id)
                                GROUP BY FLAVORID
                                ORDER BY SUM(QUANTITY) ASC)
                           WHERE ROWNUM <= 2));

    current_flavor worst_flavors%ROWTYPE;
BEGIN
    FOR current_flavor IN worst_flavors LOOP
        DBMS_OUTPUT.PUT_LINE(current_flavor.FLAVORNAME);
    END LOOP;
    DBMS_OUTPUT.PUT_LINE('');
END Get_Top_2_LeastOrdered_AtLocation;
/

CREATE OR REPLACE PROCEDURE Top_2_Least_Ordered_Flavors_EachLocation
AS
    CURSOR all_locations
    IS (SELECT * FROM LOCATIONS);

    current_location all_locations%ROWTYPE;
BEGIN
    FOR current_location IN all_locations LOOP
        DBMS_OUTPUT.PUT_LINE(current_location.locationname);
        DBMS_OUTPUT.PUT_LINE('-----');
    END LOOP;

    Get_Top_2_LeastOrdered_AtLocation(current_location.locationid);
END Top_2_Least_Ordered_Flavors_EachLocation;
```

```
END Top_2_Least_Ordered_Flavors_EachLocation;
```

Answer & Query Results

After executing the procedure, the top 2 least ordered flavors for each location are shown below. With this answer, we can see that at the Purdue Campus location, Butter Pecan and Pistachio are the least ordered and can deduce that those flavors are least enjoyed.

Purdue Campus - PMU

Butter Pecan
Pistachio

Chicago Loop

Coffee
Pistachio

Ocean Beach - Outer Sunset

Chocolate Chip Cookie Dough
Coffee

Q7 – What are the numbers/emails of each of the customers that placed more than X orders?

Business Value:

This question could provide the business with an easy way to reach out to customers and provide them with a discount to promote better customer relations.

Code Used:

To answer this question, a PL/SQL procedure was created called:

Get_Customer_Contact_For_NumOrders

It takes in a parameter called p_number_of_orders which is the number of orders to be matched against the customers. In this procedure, a cursor of all customers with order count greater than the number passed is created. The cursor is then looped through so that each customer and their contact information is printed to the screen. Below is the code used.

Tables Used: CUSTOMERS, ORDERS

```
CREATE OR REPLACE PROCEDURE Get_Customer_Contact_For_NumOrders
(p_number_of_orders IN NUMBER)
AS
    CURSOR all_customer_ids IS
        (SELECT CUSTOMERID
         FROM ORDERS
         GROUP BY CUSTOMERID
         HAVING COUNT(*) >= p_number_of_orders);

    current_customer_id all_customer_ids%ROWTYPE;
    current_customer_email CUSTOMERS.EMAIL%TYPE;
    current_customer_phone CUSTOMERS.PHONE%TYPE;
    current_customer_first CUSTOMERS.FIRSTNAME%TYPE;
    current_customer_last CUSTOMERS.LASTNAME%TYPE;
BEGIN
    FOR current_customer_id IN all_customer_ids LOOP
        SELECT EMAIL, PHONE, FIRSTNAME, LASTNAME into current_customer_email, current_customer_phone,
        current_customer_first, current_customer_last
        FROM CUSTOMERS
        WHERE CUSTOMERID = current_customer_id.CUSTOMERID;

        DBMS_OUTPUT.PUT(current_customer_first || ' ');
        DBMS_OUTPUT.PUT_LINE(current_customer_last);
        DBMS_OUTPUT.PUT_LINE('-----');
        DBMS_OUTPUT.PUT_LINE('Email: ' || current_customer_email);
        DBMS_OUTPUT.PUT_LINE('Phone: ' || current_customer_phone);
        DBMS_OUTPUT.PUT_LINE('');
    END LOOP;
END Get_Customer_Contact_For_NumOrders;
```

Answer & Query Results

Using a order count of 5, the results of executing this procedure are shown below. The results show that three customers have placed more than five orders, which could mean three customers will be receiving a coupon, etc., by email or by phone.

Savannah Lucas

Email: lucas_savannah4960@icloud.com
Phone: 635-746-1371

Malachi Glass

Email: glass-malachi1121@protonmail.org
Phone: 476-234-3285

Reagan Puckett

Email: r-puckett@outlook.ca
Phone: 156-222-1458

Q8 – Which flavor is ordered the most for all locations?

Business Value:

This question provides the business with information that can be valuable in improving the marketing strategy for the most popular flavors.

Code Used:

Tables Used: OrderLineItem, Products, Flavors

```
CREATE OR REPLACE PROCEDURE MAX_ORDER_FLAVOR
AS
    F_ID PRODUCTS.FLAVORID%TYPE;
    AMOUNT NUMBER;
    NAME VARCHAR(50);
    CURSOR FLAVOR_COUNT_LIST
    IS
        SELECT P.FLAVORID, COUNT(*)
        FROM PRODUCTS P INNER JOIN ORDERLINEITEM O ON P.PRODUCTID = O.PRODUCTID
        INNER JOIN FLAVORS F ON F.FLAVORID = P.FLAVORID
        GROUP BY P.FLAVORID
        ORDER BY COUNT(*) DESC;

BEGIN
    OPEN FLAVOR_COUNT_LIST;
    FETCH FLAVOR_COUNT_LIST INTO F_ID, AMOUNT;

    WHILE FLAVOR_COUNT_LIST%FOUND LOOP

        SELECT FLAVORNAME INTO NAME FROM FLAVORS WHERE FLAVORID = F_ID;

        DBMS_OUTPUT.PUT_LINE(NAME || ': ' || AMOUNT);
        FETCH FLAVOR_COUNT_LIST INTO F_ID, AMOUNT;
    END LOOP;

END;

EXECUTE MAX_ORDER_FLAVOR();
```

Answer & Query Results

```
Vanilla: 50
Strawberry: 48
Birthday Cake: 46
Cookies N Cream: 44
Butter Pecan: 39
Chocolate: 38
Mint Chocolate Chip: 37
Chocolate Chip Cookie Dough: 35
Coffee: 34
Pistachio: 34
```

Q9 – What are the number of scoops sold for each flavor?

Business Value:

This question helps the business develop promotional offers for different flavors helping in increasing sales.

Code Used:

Tables Used: OrderLineItem, Products, Flavors

```
CREATE OR REPLACE PROCEDURE QUANTITY_FLAVOR
AS
    F_ID PRODUCTS.FLAVORID%TYPE;
    AMOUNT NUMBER;
    NAME VARCHAR(50);
    VAL NUMBER;
    CURSOR FLAVOR_COUNT_LIST
    IS
        SELECT P.FLAVORID, COUNT(*)
        FROM PRODUCTS P INNER JOIN ORDERLINEITEM O ON P.PRODUCTID = O.PRODUCTID
        INNER JOIN FLAVORS F ON F.FLAVORID = P.FLAVORID
        GROUP BY P.FLAVORID
        ORDER BY COUNT(*) DESC;

BEGIN
    OPEN FLAVOR_COUNT_LIST;
    FETCH FLAVOR_COUNT_LIST INTO F_ID, VAL;

    WHILE FLAVOR_COUNT_LIST%FOUND LOOP

        SELECT FLAVORNAME INTO NAME FROM FLAVORS WHERE FLAVORID = F_ID;
        SELECT SUM(QUANTITY) INTO AMOUNT FROM ORDERLINEITEM O
        INNER JOIN PRODUCTS P ON P.PRODUCTID = O.PRODUCTID
        WHERE FLAVORID = F_ID;

        DBMS_OUTPUT.PUT_LINE(NAME || ': ' || AMOUNT);
        FETCH FLAVOR_COUNT_LIST INTO F_ID, VAL;
    END LOOP;

END;

EXECUTE QUANTITY_FLAVOR();
```

Answer & Query Results

```
Birthday Cake: 98
Coffee: 63
Chocolate Chip Cookie Dough: 68
Pistachio: 62
Cookies N Cream: 90
Butter Pecan: 72
Mint Chocolate Chip: 70
Strawberry: 94
Chocolate: 72
Vanilla: 99
```

Q10 - What is the average quantity of ice cream per order for given location?

Business Value:

This statistic can be useful to improve up marketing strategy and promotional offers to attract people to buy more scoops per order.

Code Used:

Tables Used: ORDERS, ORDERLINEITEM, LOCATION

```
CREATE OR REPLACE PROCEDURE AVG_QUANTITY_LOCATION
AS
    NAME VARCHAR(50);
    QUAN NUMBER;
    CURSOR c IS
        SELECT TRIM(LOCATIONNAME), ROUND(AVG(QUANTITY),2)
        FROM ORDERLINEITEM O INNER JOIN ORDERS OD ON O.ORDERID = OD.ORDERID
        INNER JOIN LOCATIONS L ON OD.LOCATIONID = L.LOCATIONID
        GROUP BY LOCATIONNAME;
BEGIN
    OPEN C;
    FETCH C INTO NAME, QUAN;
    WHILE C%FOUND LOOP
        DBMS_OUTPUT.PUT_LINE(NAME || ': ' || QUAN);
        FETCH C INTO NAME, QUAN;
    END LOOP;
END;

EXECUTE AVG_QUANTITY_LOCATION();
```

Answer & Query Results

```
Ocean Beach - Outer Sunset: 1.96
Purdue Campus - PMU: 1.93
Chicago Loop: 1.95
```

Q11 – What happens when a new customer comes in?

Business Value:

Created a trigger to help the business know when a new customer comes into the shop.

Code Used:

Tables Used: CUSTOMERS

```
CREATE OR REPLACE TRIGGER NEW_CUSTOMER
  AFTER INSERT ON CUSTOMERS
BEGIN
  DBMS_OUTPUT.PUT_LINE('A NEW CUSTOMER HAS COME TO THE ICECREAM SHOP');
END;

INSERT INTO CUSTOMERS VALUES(400100, 'Priyen', 'Shah', 'priyenshah2@gmail.com', '765-413-3314');
```

Answer & Query Results

```
Trigger NEW_CUSTOMER compiled

1 row inserted.

A NEW CUSTOMER HAS COME TO THE ICECREAM SHOP
```

Team

Alanah Rutherford

Contributions: Did Questions 1-3, helped finish the data generation code, connected flavors to products, made the code and procedures to fill the Customers, Orders, and OrderlineItem tables, did the database description.

Gisela Hagedorn

Contributions: Did Questions 4-7, completed part of the data generation code, created procedure for loading came up with the idea for the project, who it was for, and why it's needed. Created the package for the questions and procedure.

Priyen Shah

Contributions: Did questions 8-11, designed the design for the database with entities and attributes and the Entity relationship diagram. Helped work on the report and the presentation slides