

Final Presentation

By

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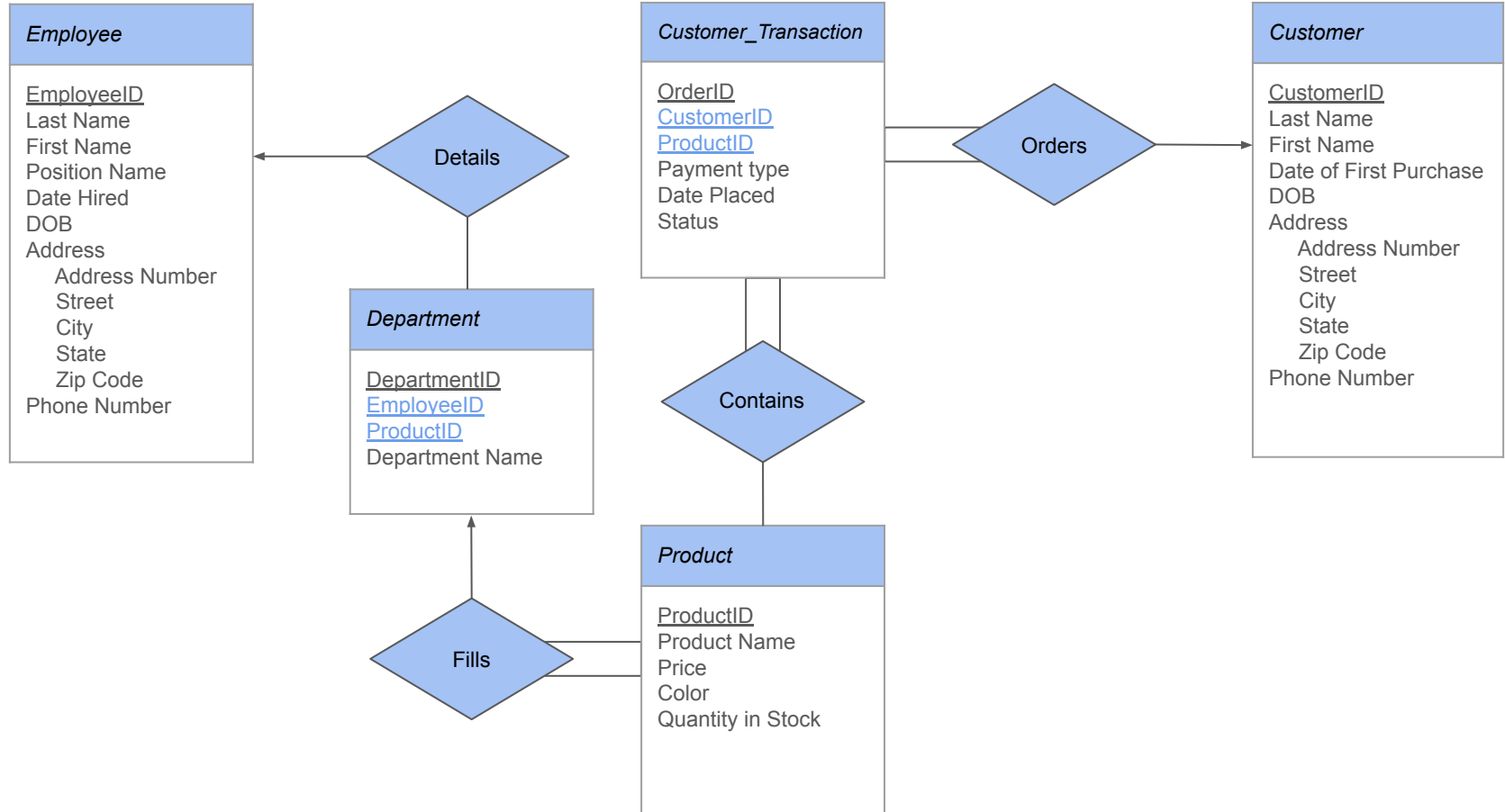
Brody Peelman

Use Cases

Interface designed for day-to-day Employee specific regiments.

- Track inventory
- Store Customer information
- Update and Facilitate orders
- Viewing Employee assignments

ER Overview



paintshop-table.sql

```
create table Employee
(
    EmployeeID      varchar(4),
    first_name      varchar(20),
    last_name       varchar(20),
    position_name   varchar(100),
    date_hired      date,
    date_of_birth   date,
    address_number  varchar(8),
    street          varchar(40),
    city            varchar(40),
    state_          varchar(30),
    zip_code        varchar(5),
    phone_number    varchar(10),

    primary key (EmployeeID)
);

create table Product
(
    ProductID      varchar(4),
    name_of_product varchar(40),
    price          numeric(6,2),
    color          varchar(20),
    quantity_in_stock varchar(4),

    primary key (ProductID)
);

create table Department2
(
    DepartmentID      varchar(4),
    department_name    varchar(20),
    EmployeeID        varchar(4),
    ProductID         varchar(4),

    primary key (DepartmentID, EmployeeID, ProductID),
    foreign key (EmployeeID) references Employee (EmployeeID)
        on delete cascade,
    foreign key (ProductID) references Product (ProductID)
        on delete cascade
);

create table Customer_Transaction
(
    OrderID          varchar(4),
    CustomerID       varchar(4),
    ProductID        varchar(4),
    payment_type     varchar(20),
    date_placed      date,
    status_          varchar(20),

    primary key (OrderID, CustomerID, ProductID)
);

create table Customer
(
    CustomerID      varchar(4),
    first_name      varchar(20),
    last_name       varchar(20),
    date_first_purchase date,
    date_of_birth   date,
    address_number  varchar(8),
    street          varchar(40),
    city            varchar(40),
    state_          varchar(30),
    zip_code        varchar(5),
    phone_number    varchar(10),

    primary key (CustomerID)
);
```

paintshop-populate.sql

```
delete from Customer;
delete from Customer_Transaction;
delete from Product;
delete from Department2;
delete from Employee;

insert into Employee values ('1201','Will','Smith','General Manager and Salesperson','2021-01-15','1968-09-25','1285','Positas Rd','Chula
Vista','California','91910','3104248675');
insert into Employee values ('1202','Chris','Rock','Salesperson','2021-02-21','1967-02-07','20896','Cabrillo Ln','Huntington Beach','California','92646','3235534467');
insert into Employee values ('1203','Vivek','Ramaswamy','General Manager and Salesperson','2021-03-15','1985-08-09','2456','Sherwin Rd','Upper
Arlington','Ohio','43221','6149932234');
insert into Employee values ('1204','Mitt','Romney','Salesperson','2021-04-17','1947-03-12','11','Clinton St','Cambridge','Massachusetts','02139','9172444776');
insert into Employee values ('1205','Barack','Obama','Salesperson','2021-05-23','1961-08-04','1515','Ward Ave','Honolulu','Hawaii','96822','8089762378');

insert into Product values ('1401','1 gallon white paint','24.99','White','25');
insert into Product values ('1402','1 gallon eggshell paint','24.99','White','25');
insert into Product values ('1403','1 gallon light grey paint','29.99','Grey','15');
insert into Product values ('1404','1 gallon dark grey paint','21.99','Grey','30');
insert into Product values ('1405','1 gallon dark beige paint','19.99','Brown','40');

insert into Department2 values ('1101','White Paints','1202','1401');
insert into Department2 values ('1101','White Paints','1205','1402');
insert into Department2 values ('1102','Grey Paints','1203','1403');
insert into Department2 values ('1102','Grey Paints','1203','1404');
insert into Department2 values ('1103','Brown Paints','1204','1405');

insert into Customer_Transaction values ('1301','1001','1403','Credit','2024-01-23','Filled');
insert into Customer_Transaction values ('1301','1001','1404','Credit','2024-01-23','Filled');
insert into Customer_Transaction values ('1302','1002','1401','Cash','2024-03-05','Incomplete');
insert into Customer_Transaction values ('1302','1002','1402','Cash','2024-03-05','Incomplete');
insert into Customer_Transaction values ('1303','1004','1405','Check','2024-12-11','Filled');
insert into Customer_Transaction values ('1303','1004','1402','Check','2024-12-11','Incomplete');
insert into Customer_Transaction values ('1303','1004','1404','Debit','2024-12-11','Incomplete');

insert into Customer values ('1001','Donald','Trump','2022-01-01','1946-06-14','691','N County Rd','Palm Beach','Florida','33480','3055542314');
insert into Customer values ('1002','Pablo','Escobar','2022-02-01','1949-01-14','1100','Brickell Bay Dr','Miami','Florida','33131','3055390183');
insert into Customer values ('1003','Lionel','Messi','2022-03-01','1987-06-24','2236','Ina Ave','Park City','Utah','84060','4692123395');
insert into Customer values ('1004','George','Lopez','2022-07-03','1961-04-03','1164','Laurel Way','Beverly Hills','California','90210','2134100932');
insert into Customer values ('1005','Mehmet','Oz','2022-05-06','1960-06-11','123','Orthodox Dr','Richboro','Pennsylvania','18954','2154325468');
```

```
MariaDB [mmamotli]> show tables;
```

Tables_in_mmamotli
Customer
Customer_Transaction
Department2
Employee
Product
advisor
classroom
course
department
instructor
prereq
section
student
takes
teaches
time_slot
users

17 rows in set (0.001 sec)

```
MariaDB [mmamotli]> select * from Employee  
-> ;
```

EmployeeID	first_name	last_name	position_name	date_hired	date_of_birth	address_number	street	city	state_	zip_code	phone_number
1201	Will	Smith	General Manager and Salesperson	2021-01-15	1968-09-25	1285	Positas Rd	Chula Vista	California	91910	3104248675
1202	Chris	Rock	Salesperson	2021-02-21	1967-02-07	20896	Cabrillo Ln	Huntington Beach	California	92646	3235534467
1203	Vivek	Ramaswamy	General Manager and Salesperson	2021-03-15	1985-08-09	2456	Sherwin Rd	Upper Arlington	Ohio	43221	6149932234
1204	Mitt	Romney	Salesperson	2021-04-17	1947-03-12	11	Clinton St	Cambridge	Massachusetts	02139	9172444776
1205	Barack	Obama	Salesperson	2021-05-23	1961-08-04	1515	Ward Ave	Honolulu	Hawaii	96822	8089762378

5 rows in set (0.012 sec)

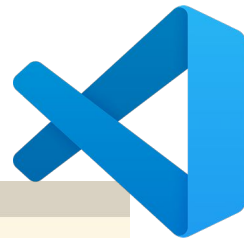
```
MariaDB [mmamotli]> select * from Department2;
```

DepartmentID	department_name	EmployeeID	ProductID
1101	White Paints	1202	1401
1101	White Paints	1205	1402
1102	Grey Paints	1203	1403
1102	Grey Paints	1203	1404
1103	Brown Paints	1204	1405

System Construction Overview

We selected php as the method of interfacing with the database primarily because of familiarity with the provided demos. The demos already contained basic versions of code corresponding to our requirements which allowed us to experiment and refine the final implementations for our Database.

Development Environment – VSCode

A screenshot of the Visual Studio Code editor interface. The top bar shows several open files: login.php, welcome.php, orders.php (active), customer-table.php, assignment-table.php, customer_transact.php, product.php, and contains-table.php. The left sidebar displays a file explorer for a project named 'bland', listing various files and folders. The main editor area shows the code for 'orders.php', which includes PHP session management and HTML/CSS for a web page titled 'View Orders'.

```
1 <?php
2 // Initialize the session
3 session_start();
4
5 // Check if the user is logged in, if not then redirect him to login page
6 if(!isset($_SESSION["loggedin"]) || $_SESSION["loggedin"] !== true){
7     header("location: login.php");
8     exit;
9 }
10 ?>
11 <!DOCTYPE html>
12 <html lang="en">
13 <head>
14     <meta charset="UTF-8">
15     <title>View Orders</title>
16     <style>
17         body{ background-color: #eaeaea; font-family: 'consolas',monospace; font-size: 120%; padding-left: 3%; padding-top: 200px;}
18         #banner{
19             background-image: url("bland.jpg");
20             background-size:50%;
21             position: fixed;
22             top: 0; left: 0; width: 100%; padding: 5px; padding-left:3%;
23             font-family: arial,serif;
24         }
25         #nav{
26             background-color: darkgrey;
27             position: fixed;
28             left: 0; top:170px; width: 100%; padding: 17px; padding-left:3.5%;
29             font-family: arial,serif;
30             font-weight:bold;
31             box-shadow: 0 6px 4px -4px gray;
32         }
33         a{
34             text-decoration: none;
35             margin-right: 3%;
36             color: #bac4ff;
37         }
38         input{
39             width: 300px;
40             padding: 7px;
41             border: 1px solid #ccc;
```


Notable Functions - PHP

```
<?php //starting php code again!
if (isset($_GET["form_submitted"])) {
    if (!empty($_GET["OrderID"]) &&
        !empty($_GET["CustomerID"]) &&
        !empty($_GET["ProductID"]) &&
        !empty($_GET["payment_type"]) &&
        !empty($_GET["date_placed"]) &&
        !empty($_GET["status_"]))
    {
        $orderid = $_GET["OrderID"]; //gets OrderID from the form
        $custid = $_GET["CustomerID"]; //gets CustomerID from the form
        $prodid = $_GET["ProductID"]; //gets ProductID from the form
        $payment = $_GET["payment_type"]; //gets payment_type from the form
        $datep = $_GET["date_placed"]; //gets date_placed from the form
        $sta = $_GET["status_"]; //gets status_ from the form

        $sqlstatement = $conn->prepare("INSERT INTO Customer_Transaction(OrderID, CustomerID, ProductID, payment_type, date_placed, status_) values(?, ?, ?, ?, ?, ?)");
        $sqlstatement->bind_param("ssssss",$orderid,$custid,$prodid,$payment,$datep,$sta); //insert the variables into the ? in the above statement
        $sqlstatement->execute(); //execute the query
        echo $sqlstatement->error; //print an error if the query fails
        $sqlstatement->close();
    }
    else {
        echo "<b> Error: Please enter into all fields.</b>";
    }

    header("Refresh:0;url=customer_transact.php");
} //end else condition where form is submitted
$conn->close();
?> <!-- this is the end of our php code -->
```

Customer_Transaction

<u>OrderID</u>	CustomerID	ProductID	Payment Type	Date Placed	Status
1301	1001	1403	Credit	01/23/2024	Filled
1301	1001	1404	Credit	01/23/2024	Filled
1302	1002	1401	Cash	03/05/2024	Incomplete
1303	1004	1405	Check	12/11/2024	Filled
1303	1004	1402	Check	12/11/2024	Incomplete
1303	1004	1404	Debit	12/11/2024	Incomplete

Notable Functions - PHP

```
<?php //starting php code again!
if (isset($_GET["form_submitted"])){
    // Create connection

    $conn = new mysqli($servername, $username, $password, $dbname);
    // Check connection
    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

    if (!empty($_GET["ProductID"]) && !empty($_GET["quantity_in_stock"])){
    {
        $productID = $_GET["ProductID"]; //gets ProductID from the form
        $newCount = $_GET["quantity_in_stock"]; //gets quantity_in_stock from the form

        $sqlstatement2 = $conn->prepare("UPDATE Product SET quantity_in_stock = $newCount where ProductID=?"); //prepare the statement
        $sqlstatement2->bind_param("i",$productID); //insert the integer variable into the ? in the above statement
        $sqlstatement2->execute(); //execute the query
        $result2 = $sqlstatement2->get_result(); //return the results
        $sqlstatement2->close();
    }
    else {
        echo "<b>Please enter a ProductID and Quantity</b>";
    }
    header("Refresh:0;url=product.php");
    $conn->close();
} //end else condition where form is submitted
} //end of our php code
```

<i>Product</i>				
<u>ProductID</u>	Name of Product	Price	Color	Quantity in Stock
1401	1 gallon white paint	24.99	White	25
1402	1 gallon eggshell paint	24.99	White	25
1403	1 gallon light grey paint	29.99	Grey	15
1404	1 gallon dark grey paint	21.99	Grey	30
1405	1 gallon dark beige paint	19.99	Brown	40

Notable Functions - PHP

```
<?php // this line starts PHP Code
include '../config.inc';

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT Customer_Transaction.*, Customer.* FROM Customer_Transaction, Customer WHERE Customer_Transaction.CustomerID = Customer.CustomerID;";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    // Setup the table and headers
    echo "<Center><table><tr><th>OrderID</th><th>CustomerID</th><th>First Name</th><th>Last Name</th>
    | <th>Phone Number</th><th>ProductID</th><th>Payment Type</th><th>Date Placed</th><th>Status</th></tr>";
    // output data of each row into a table row
    while($row = $result->fetch_assoc()) {
        echo "<tr><td>".$row["OrderID"]."</td><td>".$row["CustomerID"]."</td><td> ".$row["first_name"]."</td><td> ".$row["last_name"]."</td>
        | <td> ".$row["phone_number"]."</td><td> ".$row["ProductID"]."</td><td> ".$row["payment_type"]."</td><td> ".$row["date_placed"]."</td><td> ".$row["status_"]."</td></tr>";
    }

    echo "</table></center>"; // close the table
    echo "There are ". $result->num_rows . " results.";
    // Don't render the table if no results found
} else {
    echo "0 results";
}
$conn->close();

?> <!-- this is the end of our php code -->
```

Orders (⌘ Customer.CustomerID = Customer_Transaction.CustomerID)																
CustomerID	First Name	Last Name	Date of First Purchase	Date of Birth	Address Number	Street	City	State	Zip Code	Phone Number	OrderID	Customer_Transaction.CustomerID	Customer_Transaction.ProductID	Payment Type	Date Placed	Status
1001	Donald	Trump	01/01/2022	06/14/1946	691	N County Rd	Palm Beach	Florida	33480	(305)-554-2314	1301	1001	1403	Credit	01/23/2024	Filled
1001	Donald	Trump	01/01/2022	06/14/1946	691	N County Rd	Palm Beach	Florida	33480	(305)-554-2314	1301	1001	1404	Credit	0/1/23/2024	Filled
1002	Pablo	Escobar	02/01/2022	12/01/1949	1100	Brickell Bay Dr	Miami	Florida	33131	(305)-539-0183	1302	1002	1401	Cash	03/05/2024	Incomplete
1003	Lionel	Messi	03/01/2022	06/24/1987	2236	Ina Ave	Park City	Utah	84060	(469)-212-3395	Null	Null	Null	Null	Null	Null
1004	George	Lopez	04/01/2022	04/23/1961	1164	Laurel Way	Beverly Hills	California	90210	(213)-408-0932	1303	1004	1405	Check	12/11/2024	Filled
1004	George	Lopez	04/01/2022	04/23/1961	1164	Laurel Way	Beverly Hills	California	90210	(213)-408-0932	1303	1004	1402	Check	12/11/2024	Incomplete
1004	George	Lopez	04/01/2022	04/23/1961	1164	Laurel Way	Beverly Hills	California	90210	(213)-408-0932	1303	1004	1404	Debit	12/11/2024	Incomplete
1005	Mehmet	Oz	05/01/2022	06/11/1960	123	Orthodox Dr	Richboro	Pennsylvania	18954	(215)-432-5468	Null	Null	Null	Null	Null	Null