**Project– MSDA 652 – Matthew Harrington**

For this individual project you will design and build a database for a company, Oopsy Cell repair. The write up for the company is provided in the paragraph below. To complete this project, you will bring to bear all that you have learnt in this class. First, you will need to design a database by constructing an ERD. Next, you need to identify all relevant attributes and normalize to complete your database design. Next, you will construct a SQL database with relevant tables, based on your design, and populate it with data (4-5 rows data for each table will be enough). You will then come up with 5 complex query questions (defined as ones involving joins or subqueries) and the sql query code solutions. Your project submission must contain your ERD, a copy of your database diagram, and the five query questions and a snapshot of the output of the five queries. Limit your project document to no more than 4-5 pages, single spaced 12-point font. You are welcome to make reasonable assumptions, but make sure you note them in your project report. Limit your project to between 8-10 entities.

 Oopsy Cell Repair (OCR) is a Chicago based company with 9 locations in and around Chicago and its suburbs. Founded in 2012, OCR offers repair services to customers who are facing problems with their cell phones. Reflecting the slogan, “All will be well, with us working on your Cell”, OCR offers various services at a fixed price including screen replacement, battery replacement, data retrieval, data removal, etc. OCR can repair multiple brands of cell phones including Apple, Samsung, Nokia, Google, etc. OCR prides itself in providing upfront and transparent pricing for its services. Each of the nine locations is headed by a location manager along with 4-6 service employees. All service employees are trained to do all repairs, so there is no employee specialization or departmentalization. Further, to create a single contact point for the customer, one employee is in charge of all the repairs to a customer’s phone. OCR is seeking your help to create a database that can capture all relevant information for their business.

ASSUMPTIONS:

* Employees are assigned to customers directly and not to each of the customer’s phones.
* Service Order and Phone ID are bridging entities.
* Services are flat rate across different phone models.

ERD:Diagram

Description automatically generated

Data Base Diagram:

Diagram, schematic

Description automatically generated

QUERIES:

1. OCR is interested in making sure that their work is done in timely fashion and would like to make sure that each Working Service Order is touched at least once a week. Assuming today’s date is 10/31/2021, create a query that lists all Employee Names and Emails that have aged working service orders.

Graphical user interface, text, application

Description automatically generated

1. OCR wants to forecast upcoming revenue to assess if a new marketing campaign is needed. Create a Query to assess how much revenue will be generated from current working items.

Graphical user interface, text, application

Description automatically generated

1. OCR would like to assess productivity and would like to know many employees are currently idle. Create a query to list all employee names and their locations for employees not currently working on a service order.

Graphical user interface, text, application

Description automatically generated

1. OCR wants to update their website to include contact information for location’s phone and email, as well as the store’s manager’s phone and email. Create a query that would list this information.

Table

Description automatically generated with medium confidence

1. OCR is planning on reaching out to customers to offer a phone repair subscription plan. While reaching out they would like to make sure they have complete contact information for these customers. Write a query for customer name, email, phone numbers, address and what phones the customer has.

Graphical user interface

Description automatically generated