# Project Breakdown and timeline

First deliverable: Each group will develop an E-R model for the application and upload as any type of image format due by Oct 26.

The second deliverable: The E-R model will be translated into a relational schema implemented by an SQL script. The is script should run Postgresql. In addition, to defining the tables and constraints this script should create indexes where appropriate due by Nov 21.

Last deliverable is an application that uses the relational schema defined in the first 2 deliverables. Due by Dec 07.

### Submittal

Each will submit the part they worked on. Or if the group decided to submit one final version, each team member’s contribution has to be stated. The project will be submitted via blackboard.

# Project Description

The objective of the project is to create a coffee register that can handle the transaction aspect of the store’s sales, inventory control of the store, and the customer rewards of a patroonship program

# Database Requirements

## User

Information about the users of the system must be maintained. There will be two types of users with different privileges.

* First Name
* Last Name
* User ID
* Privilege (Integer)

## Session Management

All the session attempts (login/logout) to the system should be logged.  
The session information includes:

* User ID
* Login time
* Logout time

## Product

The product is identified by:

* Product id
* Name
* Price
* The count of this item in stock
* Category Type (Enum):
  + 1: Beverages
  + 2: Donuts
  + 3: Bagels

## Customer

The customer information includes:

* First Name
* Last Name
* Address
* Customer ID
* Lifetime earned points
* Available point

## Transaction

All purchases’ transaction will be logged with the following information

* Transaction ID
* Customer ID
* Products that were purchased in that transaction

# Application requirements

## Login

The application must provide a login portal for user to login. The application will validate the user credentials and privileges. For this project you are only required to provide the implementation of managers.

## Privileges

1. Users with *employee* privileges can do the following:
   1. Register a sale
   2. Create new customer
2. Manager have full access to the system which include:
   1. Register of a sale point
   2. Create new customer
   3. Access the business reporting
   4. Create a new employee user account

## Sales transaction

At the point of sale the user will have to enter the items being bought, the customer’s information (if available). The system will check the rewards available for the customer and alert the user if the customer has enough points for a reward.

## Reward Points calculation

As part of the sales transaction, the system will update the earned points by the customer. For each dollar spend the customer will earn a point. Once the customer has earned 25 points, they are eligible for a free coffee.

## Reporting and analytics

The manager will have the capability of running business analytics reports that will help them run the shop.

* Gross sales for a certain period of time
* Inventory queries