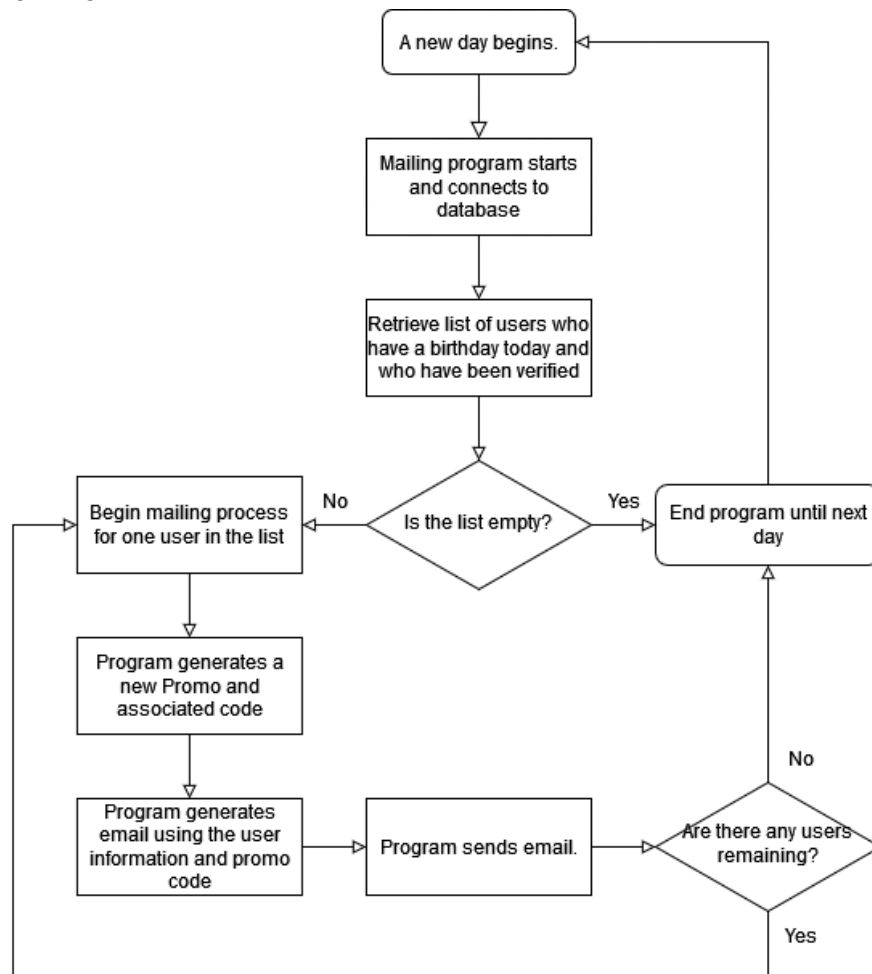
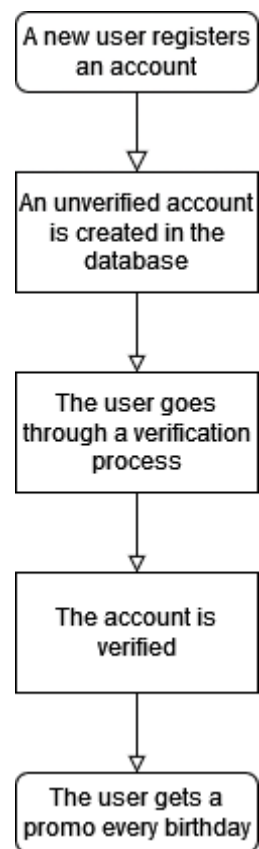


# Flowchart Diagram

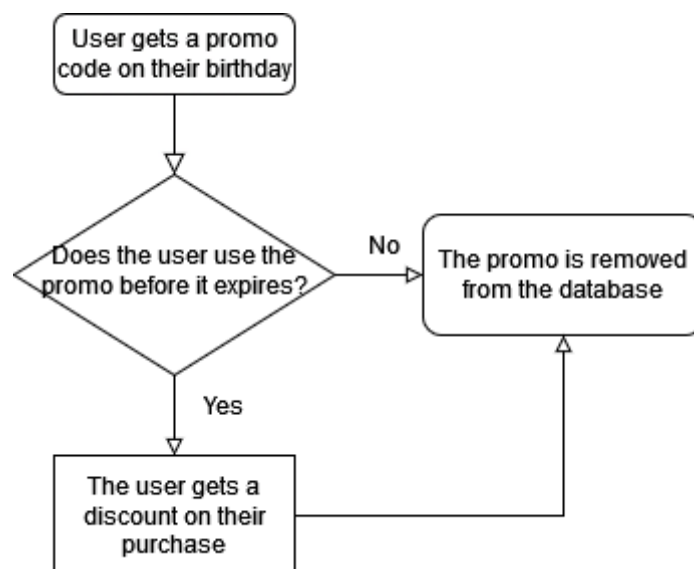
## 1. Mailing Program Flowchart



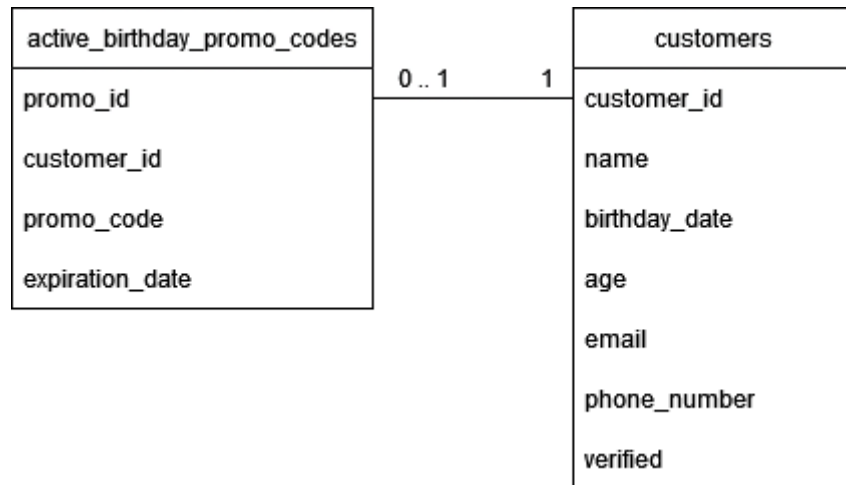
## 2. User Creation and Verification



## 3. Promo Code Use



# Database Class Diagram



The customers table stores all the data submitted by the users, including their email and phone number, which is used to create the promos.

The active\_birthday\_promo\_codes table stores the promo codes for every customer, with the customer\_id attribute being a foreign key that references the customers table. Every promo has an expiration date and will be deleted from the database after that date has passed.

# Code Implementation

The code for the mailing program is implemented primarily in PHP, with a standard MySQL Database being used to store the tables. The implementation of the code uses Object-Oriented Principles, the program is divided into several files for legibility.

**sendNotifications.php** is the main program and the one that has to be executed to send the emails. It calls database.php and user.php to get the list of users who are both verified and who have their birthday today, then it calls birthdayPromo.php to generate a promo for each user on that list and store the promo in the database. Finally, it calls mailer.php to send an email with the appropriate promo code to each user in the list.

sendNotifications.php can be automated to be executed each day through Windows Task Scheduler. In Linux environments, it can be automated as a Cron Job instead.

**database.php** connects the program to the MySQL database. It enables the program to read records in the database and insert new records as needed.

**birthdayPromo.php** contains functions to manipulate the active\_birthday\_promo\_codes table. It is used by the program to randomly generate new promos and assign them to each user.

**mailer.php** contains functions needed to send the email using PHPMailer. Mailer requires an SMTP server to properly send emails to a user, but right now it only sends emails to MailTrap rather than actual email accounts.

**user.php** contains functions to manipulate the customer's table. It is used to create new users and verify them. It also has a special function to fetch a list of users who's birthday is today and who have also been verified.