# CS3365 – Team Project: Phase I

**Software Requirements Specification document due November 4th, 2023, before 11:59 PM**

Suppose that the Texas Lottery Commission noticed a decline in ticket sales. They have numerous retail locations throughout the state of Texas. After surveying numerous customers, they found that long lines at their ticket-selling counters were causing customers to choose more convenient means of gambling. Customers stated that rather than go through the hassle of waiting in line for 10 minutes, they would rather turn to other online gambling services. After many discussions, the state's business analyst recommends a solution to let customers buy their lottery tickets online (Website, phone app, or a PC program). By doing so, customers will be able to either print or display the lottery tickets on their personal devices when they want to claim their winnings. This would save time for customers and costs for the State's Lottery Commission.

We need to allow customers to buy and print their theater tickets at home with just a few clicks/selections. Or allow them to show their lottery ticket (through a display screen such as a phone) when claiming their winning at a local claiming center.

You must design this Lottery Purchase System (LPS) so that the Americans with Disabilities Act of 1990, and other relevant government regulations such as the FCC are properly adhered to. All the features of the system described below should not take more than 4 seconds to finish executing.

Using the LPS, users need to be able to register or log in to the system. During the registration process, the user provides the necessary details such as name, email address, home address, and phone number, and creates a password for the platform. Once done, he/she has to enter the created credential to log in to the system (in this case, email can be the username). During this registration process, LPS will record the user's personal details in a database (If you are unfamiliar with databases, you could save these in a text file).

The homepage or home screen is the main page of the platform that provides users with the necessary information to navigate to "browse lottery tickets," "browse previous winning numbers", "profile page that displays user's information", "order history page" and "search for a specific ticket" pages. On the browse lottery ticket page, users will be able to see all the tickets he or she can buy. Once they find the ticket they like, they will be able to select/click that ticket and view more details (such as the drawing date, price, and the winning amount). The "search ticket" functionality will let users search for specific tickets. The "Order Page" functionality needs to show all his/her previous and current purchases. If the user happens to have a winning ticket number, this page should indicate that he/she has a winning number next to the appropriate order. Once the user clicks on an order, it should display the user's ticket and what was the winning number for that week (or if the winning number is yet to be drawn).

The ticket purchase feature is the most fundamental part of the system. The users can purchase the ticket by clicking (or selecting from the console window) on the desired ticket from the list. The customer needs to be able to select five lottery numbers manually or allow the program to

auto-select five numbers randomly. When purchasing, the maximum number of tickets a user can purchase is ten.

Once the user selects the number of tickets, the next step is to make the purchase. It is essential to make sure that the system keeps user information safe. When sensitive pieces of information like credit card numbers or users' personal information are involved, the security of the data must be the prime concern.

Rather than buying a ticket at a retail store, this feature gives the user tickets in an electronic form (Ticket number along with a unique confirmation number for each ticket). As soon as the purchase is made, an electronic ticket is generated, which can either be printed or displayed on a phone screen. This can be scanned upon their arrival at the claim center. This feature can save a lot of time for both users as well as the Texas Lottery Commission. Tickets purchased by a user will have a unique confirmation number. The system you design should only accommodate credit, debit, or PayPal as its payment methods.

The Lottery Purchase System (LPS) should also allow users to claim their winning online if the winning amount is less than $599. In this case, the user will have the option to deposit this winning into his/her PayPal or bank account. If the winning amount is more than $599, he/she will need to take their ticket to the local lottery claiming center to pick up the prize.

If the person who logs in is an administrator(admin), he/she will have access to a different set of functionalities. An admin page should have a way to retrieve the current status of the system. This status report should include things like how many tickets have been sold and how much money is made selling lottery tickets.

Admins should also have a "manage ticket" feature. This feature allows the admin to view, add, and remove tickets from the platform. For example, even though we are only selling four different types of tickets now, the admin should be able to add a new lottery ticket or remove them if the lottery commission decides to do so. The admin should also be able to add the winning amount for each ticket and change the cost of each ticket.

Four types of lottery tickets sold by the Texas Lottery Commission are: Power Ball (cost $2), Mega Millions(cost $2), Lotto Texas (cost $1), and Texas Two Step(cost $1.50). Each one of these tickets has numbers ranging from 1 to 50. A user can pick (or enter) five numbers from this range. On the ticket drawing day, if the user has a winning number, he/she will receive a prize. The following list shows how the winning is calculated:

- All five numbers are matched: The winning price is 100%
- Four numbers matched: The winning price is 20%
- Three numbers matched: The winning price is 5%
- Two numbers matched: The winning price is 1%
- One number matched: No winning price

If the user is a winner, our system needs to notify the user by email as well as display that he/she is a winner on the "Order History" page.

To keep the project simple, we assume this system doesn't have the following features:

- Users can't do guest checkout; they must register to use this system.
- Even if there are multiple winners with five numbers matching, the prize amount will not be divided among winners.
- All four tickets pick five numbers. There isn't an extra Powerball number or PowerPlay number associated with these tickets.
- All four tickets follow the same rules.
- All ticket drawings are happening once per week.
- No coupon or rewards program is associated with this system.
- We are not concerned with the user's location.
- No push notifications.

This is a regular description a stakeholder will give to a development team. Therefore, if you have anything that isn't clear, you need to talk with your stakeholders to make it clear. (In your case, your stakeholder is your professor). Whenever you have a question about the project, bring your question to the class rather than communicating through emails.

Based on the description given here, produce a Software Requirements Specification (SRS) document. A template for the SRS document is given. Work on this with your team and turn it in by November 4$^{th}$ before 11:59 PM. Everyone in the team must do an equal amount of work. Only one person from your team needs to submit this. Submission instructions will be provided three days before the due date.

(Note: The purpose of this project is to learn how software engineering concepts apply to a real-world situation. In this class, we do not encourage any gambling. The odds of winning a lottery ticket is astronomical)