**Description:**

In this project, your team will put to use the skills you have learned for reading RFPs, creating detailed requirements and then a detailed design.  Either or both parts may be documented with text, unit tests, UML, or a combination of these.

**Requirements:  The RFP**

Carrying a pencil and score card when playing mini-golf is a pain; holding the club, ball, and trying to write the score down (with no table) is difficult.  A local mini-golf course chain has contracted your software development company to automate scoring.

At each hole is a keypad on a *card-swipe station*.  The customer hopes such high-tech mini-golf courses will attract more customers.

For cost reasons, the various courses around Tampa Bay all use the same central computer (already installed), connected to the card-swipe stations at each course using a network.  All the hardware has been installed already and the network is up and running.

**Use-Cases and Other Requirements**

The one use-case for the RFP is:

1. The users are issued disposable (cardboard) swipe cards when they pay, before the round starts.  They provide their name when issued their card, which gets printed on the card.
2. After completing each hole, the user swipes their card at that hole's swipe station, and enters the number of strokes.  The card-swipe stations also display the player's name and current score (the number of strokes over or under par, so far).  Once a score is entered for a hole, the player can't change it.
3. After playing the last hole, the play can turn in their swipe card and request a printout of their round (the score card).  (That usually has a discount coupon on the back, for next time.)

For this use case to be effective for both users and companies alike:

Card Attributes to be printed:

* 1. Unique QR Code (Scanned by machinery & player’s phones.)
  2. Player’s Name
  3. Member status?
  4. When card is scanned:
     1. Enter points to account with keypad
     2. Display history average of account
     3. Change recent scores? (May encourage cheating)

The system we develop for the golf course should include: Unique QR code generated for each new card: this can be scanned by a phone computer to pull up this user’s generated score. When paying for session, they provide their name when issued their card, which gets printed on the card.

The system will refresh codes after the player swipes their card, enters their scores, and remove the card. The system will also refresh every 8 minutes for any missed updates, this time frame is decided to give the average set of players time to move on to the next hole to be completed, and will also reduce server overload from incoming information.

After game completion the player can choose to print their score card, or keep the printed card with their QR code to be kept. Each card should be printed with average cardstock to ensure durability for the entire time of their stay and so the card can be handled by each machine.

Use cases for new card system

