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Automated Mini-Golf Course Design

By The A-Team

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# Overview

This document creates the detailed requirements and detailed design for automating a Mini-Golf Course. It will be documented with text, unit tests, UML, or a combination of these methods.

This design solution will automate the task of recording the number of strokes for each hole. It will incorporate the use of a keypad at each hole. The keypad utilizes a swipe-card that identifies the player and automatically records and keeps track of their scores.

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.

## Requirements

Develop an automated mini-golf course design with the following capabilities:

* Need #1: Work with existing central network:
  + Card-swipe stations with the keypad
  + Central computer
  + Hardware and network
  + Card made with disposable cardboard (utilize a barcode??)
* Need #2: Keypad that displays numbers for score entry
* Need #3: Screen that displays:
  + Players name
  + Current score
  + Number of strokes over or under par
* Need #4: Last hole should have two extra capabilities:
  + Optional printout of their score card
  + A discount coupon printed on the back for next mini-golf game

# Use-Case scenerios

## Use Case - Golfer

### Use Triggers

* Need to record current score
* Need to add score to scorecard
* Need to show current hole score
* Need to check if strokes are over or under par
* Need to
* Need to

### Pre-Conditions

* Must have paid for mini-golf round
* Must have golfers swipe card
* Card must be activated by issuer
* Card must have the golfer’s name associated with it
  + Name can be printed on the card
  + Name can be associated with it in computer system

### Post-Conditions

* Game data must be persistent after each score entered

### Normal Flow for Golfer

1. Player purchases a round of mini-golf
2. Player is issued swipe card
   1. Swipe card has player’s name associated with it
   2. Swipe card is activated and authorized to use
   3. Swipe card values for each hole is initiated with default values
3. Player plays a round of mini-golf
   1. Player swipes their card at the card-swipe station
   2. Player enters number of strokes
   3. Card-swipe station displays player’s name, current score, number of strokes under/over par
4. Step 3 is repeated for each hole until all are played
5. After entering score for last hole, card-swipe station gives the following options:
   1. Display screen shows player’s name, current score, and final score
   2. Display screen shows two options:
      1. Yes, print scorecard
         1. Prints coupon on back of scorecard
      2. No, do not print scorecard

## Use Case – Mini-Golf Employee

### Employee Use Triggers

* Need to

### Pre-Conditions

* Must have
* Needs a password

### Post-Conditions

* Changes must be persistent

### Normal Flow

1. Steps for Employee

# UML design for classes

# Technology Requirements

# System description

# Appendix D: Staff Organizational Chart

Staff dedicated to Voice Mail Software development

