

Application Overview

The Music Festival App is a demo project based on an actual organization's needs. Over ten years ago, the Federated Music Clubs of America was accepting requests for proposal to design and build an online system to manage their regularly scheduled music festivals held nationwide. It would allow teachers to enter student's enrollment, allow coordinators to schedule auditions, tabulate ratings awarded by judges, and track accumulated points from year to year, for special recognition of achievement. It would allow teachers to select the appropriate category for each student, according to the festival rules, and choose from required music selections for that category. The system has been managed at the local level with Microsoft Excel for many years.

I submitted a request for proposal, promising beta testing with 6 months, and an initial rollout within one year. They decided to use another developer instead, and the project still has not been implemented. Being familiar with the project requirements, I naturally decided to use it as a demonstration project for my prospective employers, to showcase my capabilities. I have a Github public repository for this project at <http://github.com/gcorron/Festival>. The initial demo will be a ASP.NET Web Forms project in C# with a SQL Server back end. Although I recently completed another project using MVC, I decided on Web Forms mainly for speed, but also because it has been some years since I did that kind of project, so it will be a good refresher. Afterward, I will convert it to an MVC VB.net project, to further demonstrate my capabilities.

This document contains my initial project outline and timeline. The descriptions are not precise, allowing some flexibility during the development process. The exact UI is not defined, nor are the exact objects and data structures. However, the objects are described, and functions described according to the user role. Some functionality of the project has been simplified: only solo entries are accepted, (not duets or quartets). Also, awarding of trophies for accumulated points has not been implemented. However, the rest of this demo project remains very close to the real application requirements. The email function of the app will be mocked, since this is only a demo.

User Role	Function	Data Models	Details
App Admin	Create/Edit Division	Location -- Identity	The Division is defined as a child of an existing Division (or the 'Top Level' Division). A person is defined and assigned to be its Director. Directors are automatically given Identity records so they can login to the system.
	Notify	Location -- Identity	The app sends each Director their login information and custom instructions as entered by the App Admin.
Director	Create/Edit Regions	Location -- Identity	Directors can create Districts for their Division, assigning Coordinators, who are given Identities.
Coordinator	Create/Edit District	Location -- Identity	The Coordinator creates Regions which will host events, assigns a Chair to manage the event.
	Notify	Location -- Identity	The app sends each Chair their login information and custom instructions as entered by the Coordinator.
Chair	Create/Edit Event	Event -- Location	Event is defined for the Chair's location. New events can be generated from last year's events.
	Create/Edit Teacher	Teacher -- Identity - - Event	Participating teachers are defined.
	Open Event	Event -- Teacher -- Identity	Event enrollment is opened, and the app sends all participating teachers instructions by email.
Teacher	Enroll Students	Entry -- Student -- Event -- Teacher, Class -- Piece -- Composer	Teacher creates students and their entries for the event. They can select students they entered from the previous year, see their history, and edit their info. If they need to enter a student that is in the system who they did not enter the previous year, they can look them up by name, birthdate, and instrument to retrieve the record. Each entry is assign a class according to the rules. Most classes require the selection of a piece from the list of pieces for that class. When the enrollment is complete, Teacher marks it as Submitted -- they cannot make changes to Submitted enrollment.
Chair	Create/Edit Judge	Judge -- Event	Participating judges are defined.
	Schedule Auditions	Judge -- Event -- Entry -- Student	Chair assigns blocks of time to each judge. The app verifies that enough time is allocated for the students. The chair then fills up each block with students, until all students are assigned times.
	Notify Teachers	Entry -- Teachers -- Identity	Each Teacher in the event is sent an email with their student's playing times.
	Print Event Schedule	Entry -- Student -- Judge	Reports include: judge's schedule, student audition labels grouped by judge, student times by name and by time, teacher list.
	Enter ratings	Entry -- Event	Ratings awarded are entered, closing event.

Note: All edit functions also allow deletion if there are no dependencies in the system.

Project Pages

1. Login: Use default login page, authentication and identity management. The user ID is tied to the application with a foreign key in the Location (for Admin or Directory) or Teacher table. The person's name is retrieved from one of those tables and displayed on the navigation bar. When the master page loads, it retrieves the Person object and stores it as a Session property. It contains the Person's name, location ID and location name, and if the person is a teacher, Teacher ID and Instrument name. Location Name and Instrument are displayed on the page.
2. Admin/Director/Coordinator Page: These roles share very similar functions, so certain aspects are activated or given appropriate names on this page, depending on the role:
 - a. Admin: Create/Edit Divisions. These are nested location objects, shown in a Tree control. Admin can create new Division as a child of an existing Division, to whatever depth is required. Admin enters Division name, Director name, phone, and email. A new Identity record is created with an auto-generated password. A new Location record is created linked to the Identity record. Existing region information can be edited
 - b. Director: Can only create Regions for their location. Director assigns Coordinators. Identity records are created for the Coordinators. Existing Regions can be edited.
 - c. Coordinator: Can create Districts which will host events. Districts are assigned Chairs.
 - d. Notify button. This will generate and send emails to all the appropriate people (the next level down from the user), with specific instructions as entered on the page. Nothing is stored in the database for this function.
3. Chair Page
 - a. Create/Edit Events. Set the date/time, address, instrument category (Piano, Strings, Winds, or Vocal). Events are automatically assigned Pending status when they are created. (1 day)
 - b. Change Event status (Pending, Open, Closed, Rating)
 - c. Create/Edit Teachers/Judges. Teachers or Judges are assigned names, phone, email, Instrument category, and are automatically given Identities for login. Teachers and Judges are tied to their District, and are carried forward year to year (can be removed from participation, but not deleted if they have already participated). They can be reinstated by using a name lookup. (1 day)
 - d. Notify Teachers or Judges. Provides a template for emailed instructions, allows editing, then sends email to all participating teachers or judges. (1 day)
 - e. View Teacher enrollment activity. Submitted enrollment can be viewed, grouped by Teacher or by entry Class.
 - f. Edit submitted enrollment. Allows for last minute changes to details, or re-opening for teacher to make changes.
 - g. Schedule auditions (enabled when enrollment for event is closed). System automatically allocates time needed for each student based on Class entered, and calculates total time grouped by Class. Chair first allocates blocks of time for each judge,

displays total time allocated. Blocks can be adjusted as needed during scheduling. Then, Chair allocates student entries to each block, and rearranges order as needed.

- h. Print Event Schedule (enabled after enrollment is closed). Chair selects from 4 available reports, then generates and prints.
 - i. Enter ratings (enabled after enrollment is closed). Chair enters rating for each student entry. When finished, submits results, which closes the event.
4. Teacher Page: Allows student enrollment if open, or shows results if closed. Students are carried forward from previous year, may be deselected from participating, or looked up by name, birthdate, and instrument category.

Timeline:

(Project has already been set up and initial database tables created)

- 1. Login: 1 day.
- 2. Admin/Director/Coordinator Page: 4 days
- 3. Chair Page: 20 days
- 4. Teacher Page: 5 days
- 5. Unit Testing: 5 days
- 6. Revisions: 5 days
- 7. Install on server with sample data for demo: 2 days

At this point, the demo will be complete. In a real-world scenario, alpha testing would begin at this point. Total time: 42 days (approx. 8 weeks). Project begins Sept. 3, estimated complete by Nov. 1, 2018.

Instructions for accessing the demo and the Git repository will be made available on my resumé for all prospective employers.