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Project Specification – 1.0
CS 498

Introduction

The proposed project is the Scheduling System that is being developed for Brehm Preparatory School in Carbondale, IL. The system is to be used to aid in scheduling parent teacher conferences. The deliverables for the project are source code, technical documentation and user documentation.

What is the Scheduling System

The Scheduling System is a scheduling program designed to alleviate hand matching of students to teachers for parent-teacher conferences. The program will generate a schedule for parent-teacher meetings based on parameters set by the user (times available, meeting length, break length, etc.). The program will also provide the following capabilities:

- Manual appointment override
- Preference matching

Unique Benefits

The benefit of using this program is that there is no need to spend hours matching each student with a teacher. This program will automate that process for you while still allowing the flexibility to tweak the schedule. Also, since the program is web based, it will do away with printing out each individual teacher or parents schedule by hand. A simple query can bring together all the information in an easy to read format.

What Problem Does the Scheduling System Solve?

Brehm Preparatory School needs to efficiently do the scheduling of parent-teacher meetings during a specially designated event. They must also format the schedule into various documents for ease of use. The current system of scheduling parent-teacher meetings and producing the resulting schedule documents by hand is extremely inefficient. It takes many hours of work, and the scheduling process is unresponsive to the needs of parents, teachers, and administrators.

For the schedule, it is assumed that the parents will meet with each of their student's teachers over a specified conference period. Individual parents or teachers may not be present for the entire period and their time constraints must be allowed for. Once an initial schedule has been created, administrators may need to manually modify it. Once the schedule is finalized, schedule documents must be generated for each parent, each teacher, and the entire event.

How Does the Scheduling System Solve the Problem?

Our scheduling program will make the scheduling process faster and more responsive by automating the initial schedule generation. It will be customizable in several areas, such as setting a default meeting length or having intermission times. It will provide the ability to manually modify schedules, notify the user of any conflicts that may arise from a modification, and assist in resolving those conflicts. When parents confirm their schedule, the program will lock their meetings so that they are not changed by future modifications. The scheduling program will also save time and effort by generating the schedule documents.

Who Will Use the Scheduling System

This schedule software is used by an administrator to schedule of a meeting between teacher and parents.

Usage Principles/Constraints

Case 1 (parents' schedule fits)

User administrator.

- I. Administrator runs the schedule software and input parents' schedules and optionally administrator can make a restriction of meeting time.
- II. If a schedule is generated and parents confirm the schedule, administrator can lock the appointments.

Case 2 (parents' schedule does not fit)

User administrator

- I. Administrator runs the schedule software and input parents schedule and optionally administrator can make restriction of meeting time.
- II. If parents' scheduled meeting time do not work for their preferred schedule, administrator can override for a different time slot.

Input

The program accepts as input a *.csv* (Readable Microsoft Excel) file containing a list of students, a list of teachers and a list of teachers and the students with which they need to meet. Breaks and time limitations will be entered via the *csv* file, or later via and interface.

Output

Once the schedule has been compiled, a complete schedule for all of the teacher-student meetings could be viewed in whole or by day, as well as the schedules for specific teachers or students.

How The Scheduling System is Used

This program can be used in any situation requiring a scheduling of parent-teacher meetings.

Technical Constraints

The Scheduling System will rely upon a Unix or Windows based system running Apache 2, PHP 5, the Smarty PHP Template Engine, and MySQL 5.1. The hardware requirements are the minimum system requirements for running those three services.