# Theatre Management System

A design for the Wells College theatre management database

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# 1. Requirement Analysis

 The following section summarizes the requirements analysis conducted by Neale Petrillo to design and develop a database driven system to manage productions in and resources of the Wells College performing arts department.

## 1.1 Enterprise Overview

 The Wells College performing arts department (PAD) is responsible for managing two auditoriums (Barler recital hall and Phipps Auditorium) in addition to a dance studio and several other nontraditional venues. Each year PAD produces two major “in house” theatrical productions, two dance concerts, several instrument and vocal recitals, a variety of smaller student productions, and hosts numerous traveling productions.

 As with all performing arts institutions, PAD has at its disposal hundreds of pieces of clothing, props, building materials, lighting instruments, lighting accessories, musical instruments, rigging gear, and etcetera. Currently there is no way of tracking individual items or easily viewing the entire collection. For example, to find out if a particular prop is being used in a current production one must first check the prop storage, ask for a list of all the current prop masters, ask each prop master if they are using the particular prop, then hope you haven’t missed anyone. This system is neither practical nor efficient and makes pinning responsibility for a lost, stolen, or broken item impossible.

## 1.2 Problem Summary

 The objective of this project is to make event planning, resource control, and ticketing information easier to obtain and control. Each item PAD has in its inventory will be cataloged; new productions or individuals will then be able to electronically sign them out. Thus theater administrators will instantly be able to see who is currently using an item and any new production will be able to easily identify conflicts with other productions. This system will also allow new productions too quickly and easily sort through photos and descriptions of costumes and props thus alleviating the day or week long task of trudging through endless rows of costumes. In addition, records of ticket sales will better empower PAD administrators choose new productions to present and host as they will have a better understanding of what the Wells community enjoys watching.

## 1.3 Users

 a) Administrator – A professor or other college employee that is empowered with the ability to add new items to the database, delete items, and override various sign-outs in addition to all the normal user operations

 b) Normal User – Anyone who wishes to use PAD resources. These users will be able to create new productions as well as view and sign out resources.

## 1.4 Data

 a) Users - username, password, user type (either normal user or administrator), real name, and email address

 b) Catalog Item - tagline, description, picture, date entered, item type (a prop, musical instruments, lighting instrument, or other)

 c) Production - director (a user), production team (users), cast (users), venue, start date, end date

 d) Venues – name, capacity

## 1.5 Implementation Environment

 The implementation environment for this project requires a web server with PHP 5+ installed and configured as well as the latest stable release of MySQL Server community edition.

# 2. Database Design

 The following chapter will discuss the design of the database to drive the theater management system.

## 2.1 Semantic Model

Venue

Production

Inventory

Users

has

Cast

Crew

Job

Role

Using

## 2.2 Relational Model

Venue(name, description, capacity)

Has(Venue.name, Production.id)

Production(id, name, startDate, endDate)

Using(Production.id, Inventory.id)

Inventory(id, name, description, photo)

Job(id, title, description)

Role(id, name)

Crew(Production.id, Job.id, User.id)

Cast(Production.id, Role.id, User.id)

Users(id, name, email, username, password)