

# Programmed Solution to a Problem - Discussion

Porth-y-waen Silver Band Management System



Nia Hawkins: 7183  
The Maelor School: 68146

# Contents

<b>Discussion.....</b>	<b>2</b>
Introduction.....	2
Broad aims of the project.....	3
Limitations.....	5
Feedback.....	7

# Discussion

## Introduction

Porth-y-waen Silver Band is a local brass band in the South of Oswestry. The band has four groups, each suited to different abilities and ages - Porth-y-waen Silver Band, Porth-y-waen Youth and Training Band, Porth-y-Waen Beginners Band, and the starters group, which provides free instrument tuition. The bands each have their own conductors, who are responsible for running rehearsals and choosing music for the group to play. Each band has one rehearsal a week on a Monday or Friday evening. The band also has a committee, made up of members from each band who have regular meetings to discuss the running of the band. Each committee member is responsible for a specific area of band management, such as events or music. The band has an extensive library of music, some of which the band has not played for many years. They buy any new music and occasionally loan copies to other bands in the area. Members of the bands can borrow instruments for free from the band so anyone can play in the band, regardless of their financial background. The bands, particularly the Silver Band, and the Youth and Training band are hired for local events regularly. The bands have many bookings during the summer, around Remembrance Sunday and Christmas.

Currently, the band records the members and any relevant information about them, such as contact details on paper. The conductors record attendance in each rehearsal in a paper register and the band's librarian has a basic paper record of the music the band owns. The instrument steward has a spreadsheet of instruments the band stores as this has been recently upgraded from a minimal paper record of the instruments owned, which could be improved to a computer system. Customers may book the band by emailing or messaging the band using their website with details so the event can be arranged. The event coordinator has to check a list of bookings for available dates and then inform the members of the band in the following rehearsal.

## Broad aims of the project

The band requires a general management system that allows band members and customers to be able to:

- **Add and edit member information**
  - Allows the band to store contact and medical information about each member for emergencies
  - Allows the members' instrument and playing ability to be stored to ease looking for extra players for an event
  - Can delete members if they leave the band
- **Add and remove members to or from a group**
  - Allows a register to be created
  - Allows the conductor to record members' attendance at rehearsals
- **Create a record of members who will play at an event**
  - Add members that can play in an event to a file, so conductors know what should be in the program or if they need to find extra players.
- **Add and edit instrument information**
  - Records details about the instrument such as the serial number and service date
  - Store who has possession of the instrument
- **Search the instrument record**
  - Search for all instruments of a certain type, such as 'Cornet'
  - Search for available instruments
- **Add and edit music information**
  - Records details about the piece such as the number of parts and category
  - Store where the music is, if it is being rented and when the piece was last played by the band.
- **Search the music library**
  - Search for sets of music and specific parts in the library to determine whether new copies need to be bought.
- **Find dates the band is available and enter and edit booking details**
  - Search the events database for a date to inform the customer if the band can be booked on the date required

## Programmed Solution to a Problem - Discussion

Nia Hawkins: 7183 - The Maelor School: 68146

- Add and edit event details such as date, time and location

They also require the system to be easy to use and follow their current band colours and formatting.

## Limitations

My ability will limit the complexity of the project. I do not have extensive coding knowledge as I have not written many programs and have not been programming for many years. Certain features will require further training and research so they can be implemented into the system. More complex aspects may not be able to be included in the finished product if they are too difficult for me to code.

Time will be a crucial limitation to this project as I do not have a long timescale to complete the system. I will ensure that key features of the system are functioning before adding any features that add extra functionality. Key features will be identified by the band in an interview. My programming knowledge will also affect the timescale as I will have to research and complete training for features that I currently do not know how to code, which will take time.

As the current system is mainly paper-based, it may be difficult for the users to use the new system. Many of the members are older, so could have more difficulties using a computer. I will ensure that there is adequate help and instructions to guide them when using the system. I will ensure that the interface is simple and intuitive and that navigation around the system is logical. It will also take time for the users to enter the existing information that is stored on paper, so there will be time between creating the new system and getting it fully working and storing all necessary information.

As all music is on paper, it may be useful to the band to store copies in the system so the librarian, band members or customers could view, download and print the parts. This would not be possible as photocopying some music could be illegal. It is also not possible for a windows application to scan parts so an external system would be required which would not be possible to create in the timescale of the project. With my current knowledge, it would not be possible to store and display a .pdf file in the program, so it would require more time to complete training in this area.

It may also be difficult to notify the events coordinator that someone has booked the band as this may require emailing the contents of the booking to them which might not be possible with my current skills. For this reason, I may decide to not include a booking form in the program for the customers but I could create a screen that allows the events coordinator to enter details into a database.

The band must have access to a windows computer during rehearsals. Conductors must also have a computer at rehearsals so they can mark the members as present. This may not be possible for the band as they cannot afford to purchase and set up a computer in the rehearsal rooms that is powerful enough so it can run the system without crashing. Before creating the system, I will ensure that the band has a way to use the system.

A computer-based system may not be suitable for certain tasks. Marking each member of the band present may also be tedious on a computer depending on how many members are in the band. It

Programmed Solution to a Problem - Discussion

Nia Hawkins: 7183 - The Maelor School: 68146

could be more efficient for the conductor to mark attendance on paper. For this reason, I may decide to not include this feature in the finished program.

## Feedback

After presenting my project ideas, I gathered feedback from the class and the client.

A class member asked if the band members will be able to see when they have a rehearsal or an event. The events coordinator will be notified by email when a new booking is made. This could be extended to include members of the relevant group but it may be more time-consuming to do so. I will have different levels of access to the system for members and the committee so the system will display any events the band has booked. The members will be able to log in to a specific area of the system which will allow them to view events and enter their details.

It was suggested by a class member to include validation to avoid double booking an event. This will be included as the required group must be available for the event. This could be difficult as a band could do more than one event in a day if they are at different times. There are also multiple bands which could allow more than one event to be attended at the same time. I will ensure there are sufficient details required so validation can be done on the relevant input fields so no booking mistakes are made.

I was also recommended by a class member to add the ability to edit the record of members willing to play at events, should a member decide to stop playing at events or if they are unable to play at events for a period of time (i.e a few weeks/months maybe due to illness). This will be included in the system as it is likely that a member will have to withdraw from an event after agreeing to it.

I was asked by a class member if the band has a period of time off or time where they are not performing, will it be possible to 'freeze' bookings for the period they are unavailable for? Booking the band during holidays is not generally a problem as few people have public events that require a band. The band is usually available most of the year as it is an amateur group so the members are willing to play if they are not busy. If the band is not available for certain dates, I will allow them to input these dates into the booking record. This means it will have the same effect as the band already being booked that day so nobody can book the band.

I was questioned by a class member on how I will ensure data is kept secure and also if there will be admin and user side to the system. I will create a login page for band members and ensure that customers booking an event cannot view any data that is stored. I will have different levels of access within the band members so only people who need to access member contact details are able to, such as the conductors of the bands.

I have been encouraged to consider how I will search and sort data within the new system, including searching for a piece of music or sorting band members A - Z? I will use a searching method that is suitable for the amount of music stored. A large amount of data will be better suited to a binary search as it will allow quicker access compared to a linear search. I will use insertion sort as it will be quicker for a large amount of data.



The client also requested that a list of extra players who are not members of the band is included in the system. This is a feature that I will create as it will be useful for the band if they need someone to cover a part when they do not have enough members to play in an event. This will include similar details to the members database, such as contact details, instrument and ability. I will add the ability to search for a particular instrument to help the band find a player as quickly as possible.

I was asked how a customer will book an event if several different groups are playing in one event. I will include an additional box where the customer can add any extra information regarding the event. Also, as mentioned in the limitations, I may decide to not include a customer booking system as it could be difficult to allow customers to use it. If this is the case, the events coordinator, or any other committee member can input event details and enter any extra information.