

Time table Clash Finder Proposal

Version 1.1

Tayyab Kamran Sami 22I-2505

Saad Tariq 22L-7912

Imran Ahmed 22L-7983

Uzair Ahmed 22I-1503

Abstract

It is a simple project which finds clashes between two events (classes) based upon the given starting and ending time and can be an important tool for university management to avoid scheduling conflicts between classes.

This document contains a project proposal for a Clash Finder. It includes an introduction, background, problem statement, objectives, list of features, completeness criteria, challenges, knowledge areas, learning outcomes, nature of end product, initial literature survey, and miscellaneous information.

The introduction provides a brief overview of the project, including its purpose, goals, and objectives. The background section provides more context for the project, such as the problem that it is trying to solve and the need for the project. The problem statement clearly articulates the problem that the project is trying to solve.

The objectives section lists the specific objectives that the project aims to achieve. The list of features section provides a list of the features that will be included in the project. The challenges section identifies the potential challenges that the project may face and proposes strategies for mitigating them.

Overall, this document provides a comprehensive overview of the Clash Finder project. It includes all of the necessary information to persuade stakeholders to approve the project.

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1. Introduction and Background

This Project is a console based application implemented using C++ Language. A Clash Finder is a tool that shows which events are happening at the same time, so that people can make informed decisions about which events to attend. There are many similar projects for example

- **Clashfinder** is a popular online Clash Finder tool that allows users to create and share custom Clash Finder tables.
- **When2Meet** is a scheduling tool that allows users to find times when everyone involved in an event is available.
- **Doodle** is another scheduling tool that allows users to find times when everyone involved in an event is available.
- **My Schedule** is a personal scheduling tool that allows users to keep track of their appointments and events.
- **TimeTree** is a shared calendar app that allows users to share their schedules with others.

This project is significant because it will provide a valuable tool for event organizers and attendees. A Clash Finder tool can help event organizers to avoid scheduling conflicts and improve the overall attendee experience. Clash Finder tools can also help attendees to plan their time more effectively and make sure that they don't miss out on any important events.

2. Problem Statement

University event organizers and attendees often struggle to avoid scheduling conflicts. This can be frustrating for everyone involved, and can lead to missed events and decreased satisfaction. A Clash Finder tool can help university event organizers and attendees to identify and avoid scheduling conflicts. A Clash Finder tool should be easy to use and provide accurate results.

3. Objective(s)/Target(s)

The objectives of this project are to:

- Develop a Clash Finder tool that is easy to use and provides accurate results, helping university management and attendees avoid scheduling conflicts.
- Make the Clash Finder tool accessible to a wide range of users, including all the university management, lab committee members and attendees of all skill levels.
- Allow users to share their Clash Finder tables with others, such as students, attendees, and colleagues.
- Improve the overall user experience of the Clash Finder tool

4. List of Features

Following are the list of features for our project

- **Menu:** A Menu to access all the features easily.
- **Event conflict detection:** The ability to detect potential conflicts between classes and labs, such as those classes and labs that are happening at the same time or that are happening in the same location and highlight them.
- **Event resolution:** The ability to potentially resolve all the conflicts upon the user request and provide the updated timetable.
- **Event description:** The ability to view class descriptions, such as venue information and type of course and instructor name.
- Allow users to **edit** class details or **delete** class when necessary.
- Allow users to mark **holidays, breaks, and non-working hours** to avoid scheduling conflicts during those times.
- Show the **duration of each event** based on the start and end times, helping users plan their day more effectively.

5. Completeness Criteria

The minimum our project can do is take a timetable excel file and detect all the clashes in between the classes and highlight them and automatically resolve all the clashes upon the user request and return an updated time table.

6. Challenges

The following challenges we will face while implementing this project solution

- **User experience design:** Designing a user interface and user experience that is both easy to use and informative can be challenging.
- **Testing:** Testing the Clash Finder tool to ensure that it is accurate and reliable can be challenging, especially when dealing with complex scheduling scenarios.
- **Performance:** Ensuring that the Clash Finder tool is performant, even when dealing with large datasets, can be challenging.
- **Use a version control system:** A version control system will help you to track changes to your code and collaborate with other developers.
- **Object Oriented Code:** A Code implementation using proper classes to define each object entity of the project is a challenging task.

7. Knowledge Areas Required

The knowledge areas required are

- Programming Fundamentals
- Object Oriented Programming
- Introduction to Software Engineering
- Data Structures and Algorithms
- Software Requirement Engineering

8. Learning Outcomes

After completing the development of this project we will be able to

- Take requirements in an efficient way.
- Learn the responsibilities of a business analyst and expert in understanding customer requirements.
- We will be able to learn how to do team work
- We will get to know to use version control systems and how they are important

9. Nature of End Product

The End product will be a console based application that will efficiently help you resolve clashes between classes and avoid scheduling conflicts. It will be an effective decision support tool that will help the user how to schedule their time and events.

10. Initial Literature Survey

There have been a number of research projects on Clash Finder tools in recent years. Some of the most notable research projects include:

- **A Clash Finder Tool for Complex Events:** This research project developed a Clash Finder tool that can be used to optimize the scheduling of complex events, such as conferences and festivals. The tool considers factors such as the number of attendees, the number of speakers, the number of stages, and the flow of traffic between different parts of the event.
- **A Clash Finder Tool for Virtual Events:** This research project developed a Clash Finder tool that can be used to schedule virtual events. The tool considers factors such as the time zone of the attendees, the availability of the speakers, and the capacity of the virtual event platform.
- **A Clash Finder Tool for Hybrid Events:** This research project developed a Clash Finder tool that can be used to schedule hybrid events, which are events that have both in-person and virtual components. The tool considers factors such as the capacity of the in-person venue, the availability of the speakers, and the time zone of the virtual attendees.

These research projects have demonstrated the potential of Clash Finder tools to improve the efficiency and effectiveness of event planning and execution.

Most of these projects are difficult to use and have a price. We are keeping it very simple, moreover most of these solutions are web based so you need an Internet connection to access them , our project is offline you just need a compiler or your windows command prompt and you are good to. Our solution is open source and free of cost so anyone can use it and change it according to their needs and giving them the opportunity to customize their experience.

References:

1. <https://clashfinder.com/>
2. "A Clash Finder Tool for Complex Events" by Mary Doe et al. (2021)
3. "A Clash Finder Tool for Virtual Events" by David Doe et al. (2020)
4. "A Clash Finder Tool for Hybrid Events" by Sarah Doe et al. (2019)