**A**

**PROJECT REPORT**

**On**

# “Tournament Manager”

***Submitted to:***

***Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur for***

***Partial fulfillment of the degree of***

**Bachelors of Technology**

**In**

**Computer Science and Engineering**

***Submitted by:***

**Student Name Student Name**

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**Student Name**

***Under the Guidance of***

## Prof. Guide Name



**Department of Computer Science and Engineering**

**NAAC Accredited with A+ Grade ISO9001:2015 Certified**

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**(An Autonomous Institute affiliated to RTMNU, Nagpur)**

**Session 2024-2025**



# CERTIFICATE

This is to certify that project work described in this report entitled, “**Mini** **Project Title”** was carried out by **Group Students Name,** in Tulsiramji Gaikwad-Patil College of Engineering & Technology, Nagpur under my supervision and guidance in partial fulfillment of the requirement for the degree of **Computer Science & Engineering** of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

This work is the own work of the candidate, completed in all respect and is of sufficiently high standard to warrant its submission to the said degree. The assistance and resources used for this work are duly acknowledged.

**Guide Project Coordinator HOD (CSE)**

**Date: / / 2024**



**DECLARATION**

I hereby declare that this project titled “**Mini** **Project Title”**” is a bonafide and authentic record of the work done by me under supervision of **Guide Name** during academic session 2024-25.

The work presented here is not duplicated from any other source and also not submitted earlier for any other degree/diploma of any university. I understand that any such duplication is liable to be punished in accordance with the university rules. The source material, data used in this research have been duly acknowledged.

**Date: Place:**

**Name & Signature of Students**

**Students Name**

**Students Name**

**Students Name**

**Students Name**

**Students Name**



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We are also thankful to all the faculty members and all non-teaching staff of the department & college for their cooperation throughout the project work.

We, also put forth my/our deepest sense of gratitude towards the Principal, TGPCET for constant motivation and providing necessary infrastructure.

**Date:**

**Place:** **PROJECTEE**

**Students Name**

**Students Name**

**Students Name**

**Students Name**

**Students Name**

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**1. Introduction**

Managing football tournaments can be a challenging task due to various components such as scheduling matches, recording scores, tracking team performance, and generating reports. To simplify this process, the *Football Tournament Management System* was developed as a mini-project. This system aims to digitize the manual processes associated with managing football tournaments by providing an intuitive web-based interface for users.

The project combines a modern frontend developed using HTML, CSS, and JavaScript to ensure an engaging user experience. The backend is powered by Python's Flask framework, offering robust functionalities and seamless communication between the client and the server. The system is designed to cater to administrators for scheduling and managing tournaments and players or teams for accessing match details.

**2. Objectives**

The primary objectives of the Football Tournament Management System are:

1. **Automation of Tournament Activities:** Replace manual methods of tournament management with an efficient automated system.
2. **User-Friendly Interface:** Provide an intuitive and interactive web-based platform for administrators and participants.
3. **Efficient Scheduling:** Enable organizers to create and manage tournament schedules with ease.
4. **Real-Time Updates:** Allow users to view real-time scores, results, and team standings.
5. **Centralized Data Management:** Ensure all tournament data, such as team registrations, match results, and performance metrics, are stored securely in a centralized database.
6. **Scalability:** Design the system to accommodate tournaments of varying sizes, ranging from small local matches to larger leagues.

**3. System Architecture**

The system is designed using the **Model-View-Controller (MVC)** architecture for better modularity and scalability.

**Frontend:**

* Developed with HTML, CSS, and JavaScript.
* Provides pages for user login, tournament schedule, team registration, and real-time match updates.

**Backend:**

* Built using Flask, a lightweight and scalable Python web framework.
* Handles routing, data processing, and interaction with the database.

**Database:**

* Uses SQLite for data storage due to its lightweight nature, making it ideal for a mini-project.
* Stores tables for user credentials, teams, matches, and scores.

**Workflow:**

1. **User Interface (UI):** Users interact with the frontend to perform actions such as registering a team or checking schedules.
2. **Backend Processing:** Flask handles these requests, retrieves or modifies data in the database, and sends the appropriate response.
3. **Dynamic Content:** JavaScript ensures that the website dynamically updates without requiring a full page reload, offering a smooth user experience.

**4. Implementation**

The implementation of the Football Tournament Management System involved the following phases:

**Frontend Development:**

* HTML was used to structure the web pages, including forms for registration and tables for match details.
* CSS provided styling to ensure a visually appealing layout, such as custom buttons, responsive designs, and animations.
* JavaScript was utilized for client-side validation and dynamic content loading, such as updating scores without refreshing the page.

**Backend Development:**

* Flask served as the core of the backend, routing user requests to appropriate modules.
* RESTful APIs were implemented to handle CRUD (Create, Read, Update, Delete) operations for managing teams, matches, and scores.

**Database Design:**

* Tables were created to store team details (e.g., team name, players), match information (e.g., date, time, venue), and results.
* Relationships were established between tables to simplify query operations, such as fetching all matches for a particular team.

**Integration Testing:**

* The system was tested rigorously to ensure seamless communication between the frontend and backend.
* Edge cases, such as invalid registrations and simultaneous updates, were addressed to make the system robust.

**5. Outline of the Project Work**

1. Requirement analysis and problem definition.
2. Designing the frontend UI/UX using HTML, CSS, and JavaScript.
3. Developing the backend using Flask and SQLite.
4. Integrating the frontend and backend through APIs.
5. Testing and debugging the complete system.
6. Final deployment and preparation of project documentation.
7. **Conclusion**

The Football Tournament Management System successfully meets the objectives of digitizing and automating the process of managing football tournaments. The project showcases the seamless integration of a user-friendly frontend with a robust backend. Through this project, we learned about web development practices, database management, and system integration, which are invaluable skills for future endeavors.

1. **Tentative Scheduling**

| **Phase** | **Duration** | **Description** |
| --- | --- | --- |
| Requirement Gathering | Week 1 | Understanding the project requirements. |
| Frontend Development | Week 2-3 | Designing and developing the user interface. |
| Backend Development | Week 4-5 | Setting up Flask and SQLite for system logic. |
| Testing and Debugging | Week 6 | Identifying and fixing bugs in the system. |
| Final Presentation | Week 7 | Deployment and preparation for final submission. |

**8. References**

1. Flask Documentation: https://flask.palletsprojects.com
2. W3Schools HTML, CSS, and JavaScript Tutorials: <https://www.w3schools.com>
3. SQLite Documentation: https://sqlite.org/docs.html
4. Python Official Website: <https://www.python.org>
5. Stack Overflow: For resolving development-related queries.