Festipal

Manipal Festivity Navigator

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by

Shouvik Kumar **Harshit Dugar** **Piyush Prakash**

220911598 **220911656** **220911665**

Under the guidance of

Mr. Akshay K C
Assistant Professor
Department of I&CT
Manipal Institute of Technology
Manipal, Karnataka, India

Mrs. Pooja S
Assistant Professor
Department of I&CT
Manipal Institute of Technology
Manipal, Karnataka, India

Dr. Nisha P Shetty
Assistant Professor
Department of I&CT
Manipal Institute of Technology
Manipal, Karnataka, India

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ABSTRACT

- The event management system aims to streamline the process of organizing and managing various events efficiently. It includes modules for event creation, participant registration, coordinator assignment, and event information management.
- The system allows users to create different types of events, such as conferences, workshops, and seminars, and manage event details such as date, time, location, and pricing.
- Participants can register for events online, and coordinators can oversee event logistics and communication.
- The system ensures data integrity and security by implementing normalization techniques and access control measures.
- By automating event management tasks, the system enhances productivity and improves the overall event experience for organizers, participants, and coordinators.

ACM Taxonomy:

[D. Software]: Software Engineering; Software Design; Software Maintenance;

[H. Information Systems]: Database Management; Information Retrieval; Data Management;

[K. Computing Milieux]: Computers and Society; Environmental Impacts of Computing; Human-computer Interaction.

[L. Computing Methodologies]: User Interface Design; Database Systems; Document Processing.

Sustainable Development Goals:

SDG 9: Industry, Innovation, and Infrastructure

The project leverages technology to innovate and enhance existing processes in event management. By digitizing event planning, registration, and coordination, the system contributes to the development of resilient infrastructure and innovation in event organization.

SDG 12: Responsible Consumption and Production

Through the reduction of paper and ink usage via digitization, the event management system supports the promotion of responsible consumption and production patterns. This shift towards digital solutions promotes efficiency and reduces the environmental impact associated with traditional paper-based event management approaches.

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List of Tables

1. **event_type**
    - type_id (Primary Key)
    - Type_title
2. **events**
    - event_id (Primary Key)
    - Event_title
    - Event_price
    - Participant
    - Img_link
    - type_id (Foreign Key referencing event_type.type_id)
3. **event_info**
    - event_id (Primary Key, Foreign Key referencing events.event_id)
    - Date
    - Time
    - Location
4. **participant**
    - RegNo (Primary Key)
    - Name
    - Branch
    - Sem
    - Phone
5. **registered**
    - rid (Primary Key)
    - RegNo (Foreign Key referencing participant.RegNo)
    - event_id (Foreign Key referencing events.event_id)
6. **staff_coordinator**
    - stid (Primary Key)
    - name
    - phone
    - event_id (Foreign Key referencing events.event_id)
7. **student_coordinator**
    - sid (Primary Key, Foreign Key referencing participant.RegNo)
    - St_name
    - Phone
    - event_id (Foreign Key referencing events.event_id)

List of Figures

Abbreviations

- **CRUD**: Create, Read, Update, Delete - Basic operations for managing data in a system.
- **RDBMS**: Relational Database Management System - A type of database management system that stores data in a structured format, organized in tables with relationships between them Software Requirements Specification for Festipal.
- **API**: Application Programming Interface - A set of rules and protocols for building and interacting with software applications.
- **HTTPS**: Hypertext Transfer Protocol Secure - A secure version of HTTP, the protocol over which data is sent between a browser and a website.

Legend

This legend specifies which letter represents which attribute.

- A - type_id
- B - type_title
- C - event_id
- D - event_title
- E - event_price
- F - participant
- G - img_link
- H - Date
- I - time
- J - location
- K - RegNo
- L - name
- M - branch
- N - sem
- O - phone
- P - rid
- Q - stid
- R - sid
- S - st_name

Chapter 1

Introduction

1.1 Purpose

The purpose of this document is to provide a comprehensive overview of the project "Festipal: Manipal Festivity Navigator." It outlines the objectives, methodology, and results of the project, aiming to streamline event registrations for college fests and student body events in Manipal.

1.2 Document Conventions

This document follows standard formatting conventions for project reports, providing clear sections for easy navigation and understanding.

1.3 Intended Audience and Reading Suggestions

The intended audience for this document includes project stakeholders, developers, project managers, and anyone interested in understanding the development and implementation of the Festipal system. It is recommended to read the document sequentially to grasp the project's progression from inception to results.

1.4 Product Scope

The scope of the project encompasses the development of Festipal, a user-friendly platform for simplifying event registrations in Manipal. It aims to replace existing inefficient methods with an automated system, enhancing the overall college fest experience.

Chapter 2

Literature and Background

In the ever-evolving realm of event management, orchestrating seamless experiences and coordinating diverse activities are pivotal to the success of any event. Events serve as platforms for engagement, networking, and cultural exchange, playing a vital role in fostering community spirit and enhancing societal cohesion. However, the traditional methods of organizing events have often been plagued by inefficiencies, logistical hurdles, and manual processes.

Recognizing the need for a more streamlined and innovative approach to event management, the "Event Management System" project was conceptualized. Rooted in the principles of efficiency and adaptability, this project aims to revolutionize how events are planned, coordinated, and executed. By harnessing the power of technology and modern methodologies, the project endeavors to digitize the event management process, thereby enhancing efficiency, reducing overheads, and promoting sustainable event practices.

The "Event Management System" project transcends mere digitization; it represents a paradigm shift in how organizers conceptualize and execute events. It embodies a dedication to embracing technological advancements, fostering creativity, and ensuring the seamless orchestration of events in diverse settings.

As the landscape of event management evolves in the digital era, the "Event Management System" project emerges as a beacon of innovation, offering a transformative solution to the age-old challenges of event coordination and execution. With its potential to streamline processes, enhance collaboration, and elevate the overall event experience, the project promises to redefine the standards of excellence in event management.

Chapter 3

Problem Statement

Organizers face significant challenges that impede efficiency and effectiveness. Traditional methods of event coordination often rely on manual processes and outdated systems, leading to inefficiencies and missed opportunities for improvement. These challenges are multifaceted:

- Inefficiency: Manual processes, such as paper-based registration and event management, result in delays and errors, hindering the smooth execution of events. Organizers struggle to keep track of registrations, coordinate logistics, and communicate effectively with participants and stakeholders.
- Effectiveness: Fragmented systems and disjointed processes make it difficult for organizers to oversee all aspects of event planning and execution cohesively. Separate tools and platforms for registration, communication, and logistics management can lead to duplication of effort, miscommunication, and a lack of centralized control.

Addressing these challenges requires a holistic approach that embraces technological innovation. By modernizing event management processes and adopting environmentally conscious strategies, organizers can enhance efficiency and effectiveness.

The "Event Management System" project seeks to address these challenges by providing a comprehensive solution that streamlines event coordination, fosters effectiveness, and promotes sustainability. Through the digitization of event planning, registration, and management processes, the project aims to empower organizers to execute successful events while minimizing resource consumption.

Chapter 4

Data Design

REDUCTION:

1. R1 event_type (A, B)
   FD: type_id -> type_title
   A (type_id, type_title)
2. R2 events (C, D, E, F, G, A)
   FD: event_id -> event_title, event_price, participant, img_link, type_id
   C (event_id, event_title, event_price, participant, img_link, type_id)
3. R3 event_info (C, H, I, J)
   FD: event_id -> Date, time, location
   C (event_id, Date, time, location)
4. R4 participant (K, L, M, N, O)
   FD: RegNo -> name, branch, sem, phone
   K (RegNo, name, branch, sem, phone)
5. R5 registered (P, K, C)
   FD: rid -> RegNo, event_id
   P (rid, RegNo, event_id)
6. R6 staff_coordinator (Q, L, O, C)
   FD: stid -> name, phone, event_id
   Q (stid, name, phone, event_id)

7. R7 student_coordinator (R, S, O, C)
   FD: sid -> st_name, phone, event_id
   R (sid, st_name, phone, event_id)

NORMALIZATION:

Functional Dependencies:

Functional dependencies represent the relationships between attributes within each table.

1. R1 **event_type (A, B)**
   - No functional dependencies (FDs) other than trivial ones.
2. R2 **events (C, D, E, F, G, A)**
   - C -> D, E, F, G, A (event_id determines event_title, event_price, participant, img_link, and type_id)
   - A -> B (type_id determines type_title)

3. R3 **event_info (C, H, I, J)**
    - C -> H, I, J (event_id determines Date, time, and location)
4. R4 **participant (K, L, M, N, O)**
    - No functional dependencies other than trivial ones.
5. R5 **registered (P, K, C)**
    - P -> K, C (rid determines RegNo and event_id)
6. R6 **staff_coordinator (Q, L, O, C)**
    - Q -> L, O, C (stid determines name, phone, and event_id)
7. R7 **student_coordinator (R, S, O, C)**
    - R -> S, O, C (sid determines st_name, phone, and event_id)

Decomposition into First Normal Form (1NF):

1NF or first normal form checks whether each cell in the table has atomic values. This means that no cell should have multiple values or be able to be further divided. We also have to check whether each column has the same type of values. If a cell contains numbers then all the cells in that row should contain only numbers.

The Tables in 1NF are:

The tables are already in 1NF since they all have atomic values.

1. R1 (A, B)
    FD: type_id -> type_title
    A (type_id, type_title)
2. R2 (C, D, E, F, G, A)
    FD: event_id -> event_title, event_price, participant, img_link, type_id
    C (event_id, event_title, event_price, participant, img_link, type_id)
3. R3 (C, H, I, J)
    FD: event_id -> Date, time, location
    C (event_id, Date, time, location)
4. R4 (K, L, M, N, O)
    FD: RegNo -> name, branch, sem, phone
    K (RegNo, name, branch, sem, phone)
5. R5 (P, K, C)
    FD: rid -> RegNo, event_id
    P (rid, RegNo, event_id)
6. R6 (Q, L, O, C)
    FD: stid -> name, phone, event_id
    Q (stid, name, phone, event_id)
7. R7 (R, S, O, C)
    FD: sid -> st_name, phone, event_id
    R (sid, st_name, phone, event_id)

Decomposition into Second Normal Form (2NF):

2NF or second normal form is essentially an extension on 1NF. In 2NF apart from the properties of 1NF, 2NF addresses the issue of partial dependencies also.
Eg: If we have a table as follows STUDENT(Student_ID, Student_Name, Course_ID, Course_Name, Instructor), in this Course_Name and Instructor are dependent on Course_ID then in 2NF we would separate the tables to achieve this. One table containing STUDENT_DETAILS and one having COURSE)DETAILS.

The Tables in 2NF are:

1. R1 (A, B)
   FD: type_id -> type_title
   A (type_id, type_title)

This table is already in 2NF since type_title is fully functionally dependent on the candidate key type_id.

2. R2 (C, D, E, F, G, A)
   FD: event_id -> event_title, event_price, participant, img_link, type_id
   C (event_id, event_title, event_price, participant, img_link, type_id)

This table is already in 2NF since both event_title, event_price, participant, and img_link are fully functionally dependent on the candidate key event_id, and type_title is fully functionally dependent on the candidate key type_id.

3. R3 (C, H, I, J)
   FD: - event_id -> Date, time, location
   C (event_id, Date, time, location)

This table is already in 2NF since Date, time, and location are fully functionally dependent on the candidate key event_id.

4. R4 (K, L, M, N, O)
   FD: RegNo -> name, branch, sem, phone
   K (RegNo, name, branch, sem, phone)

This table is already in 2NF since name, branch, sem, and phone are fully functionally dependent on the candidate key RegNo.

5. R5 (P, K, C)
   FD: rid -> RegNo, event_id
   P (rid, RegNo, event_id)

This table is already in 2NF since both RegNo and event_id are prime attributes and RegNo is a candidate key, and event_id is a fully functionally dependent on the candidate key rid.

6. R6 (Q, L, O, C)
   FD: stid -> name, phone, event_id
   Q (stid, name, phone, event_id)

This table is already in 2NF since both name, phone, and event_id are fully functionally dependent on the candidate key stid.

7. R7 (R, S, O, C)
   FD: sid -> st_name, phone, event_id
   R (sid, st_name, phone, event_id)

This table is already in 2NF since both st_name, phone, and event_id are fully functionally dependent on the candidate key sid. All tables are already in 2NF, so no further decomposition is needed.

Decomposition into Third Normal Form (3NF):

In the third normal form (3NF), we ensure that there are no transitive dependencies, i.e., no non-prime attribute should transitively depend on any other non-prime attribute.

The Tables in 3NF are:

1. R1 (A, B)
   No transitive dependencies present.
   Already in 3NF.
2. R2 (C, D, E, F, G, A)
   No transitive dependencies present.
   Already in 3NF.
3. R3 (C, H, I, J)
   No transitive dependencies present.
   Already in 3NF.
4. R4 (K, L, M, N, O)
   No transitive dependencies present.
   Already in 3NF.
5. R5 (P, K, C)
   No transitive dependencies present.
   Already in 3NF.
6. R6 (Q, L, O, C)
   No transitive dependencies present.
   Already in 3NF.
7. R7 (R, S, O, C)
   No transitive dependencies present.
   Already in 3NF.

All tables are already in 3NF because they don't exhibit any transitive dependencies.
No further decomposition is needed.

Boyce-Codd Normal Form (BCNF):

We'll analyze each table to ensure that it complies with Boyce-Codd Normal Form (BCNF), where every determinant is a candidate key.

The Tables in 3NF are:

1. R1 (A, B)

No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

2. R2 (C, D, E, F, G, A)

No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

3. R3 (C, H, I, J)

No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

4. R4 (K, L, M, N, O)

No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

5. R5 (P, K, C)

No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

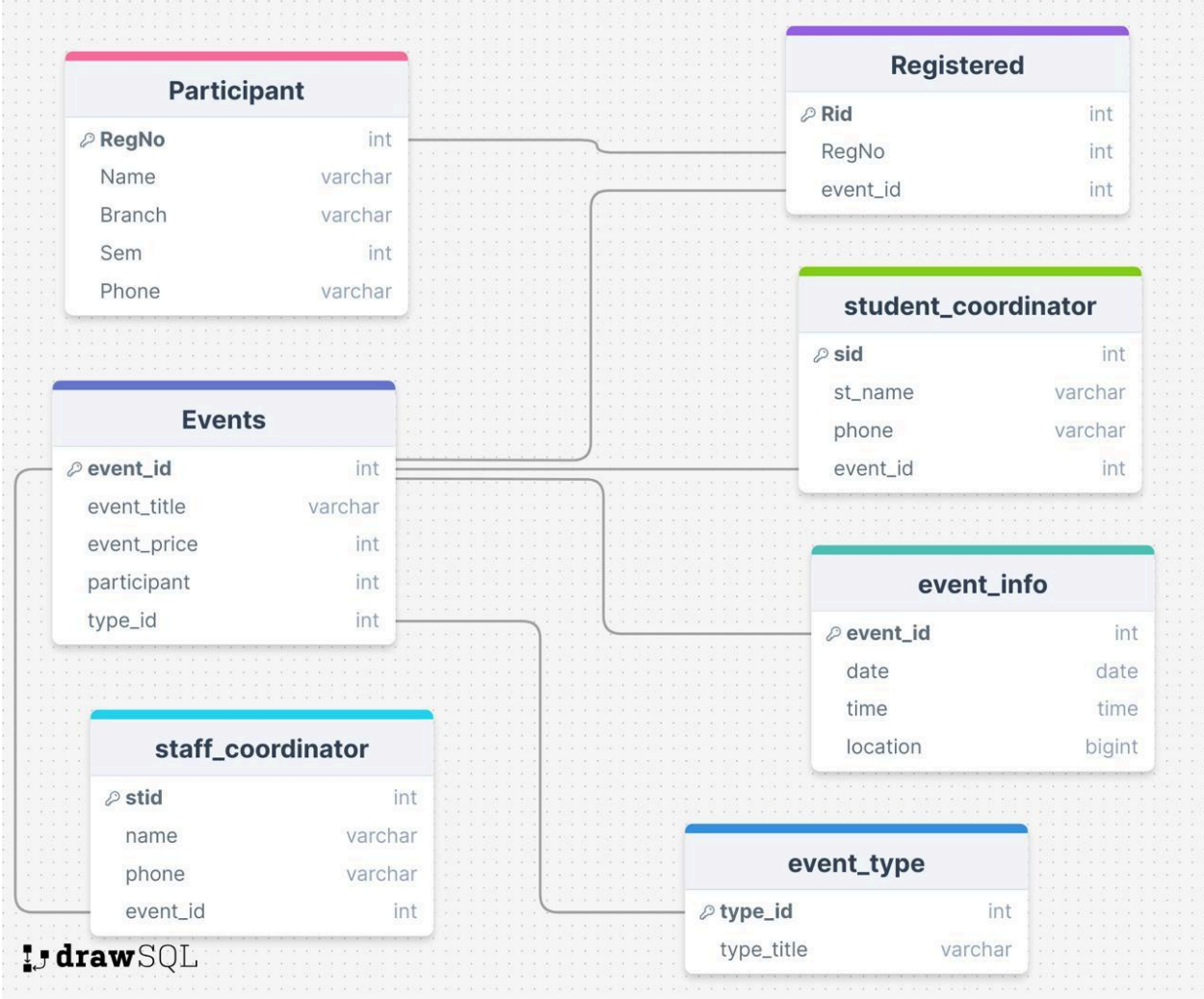
6. R6 (Q, L, O, C)

No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

7. R7 (R, S, O, C)

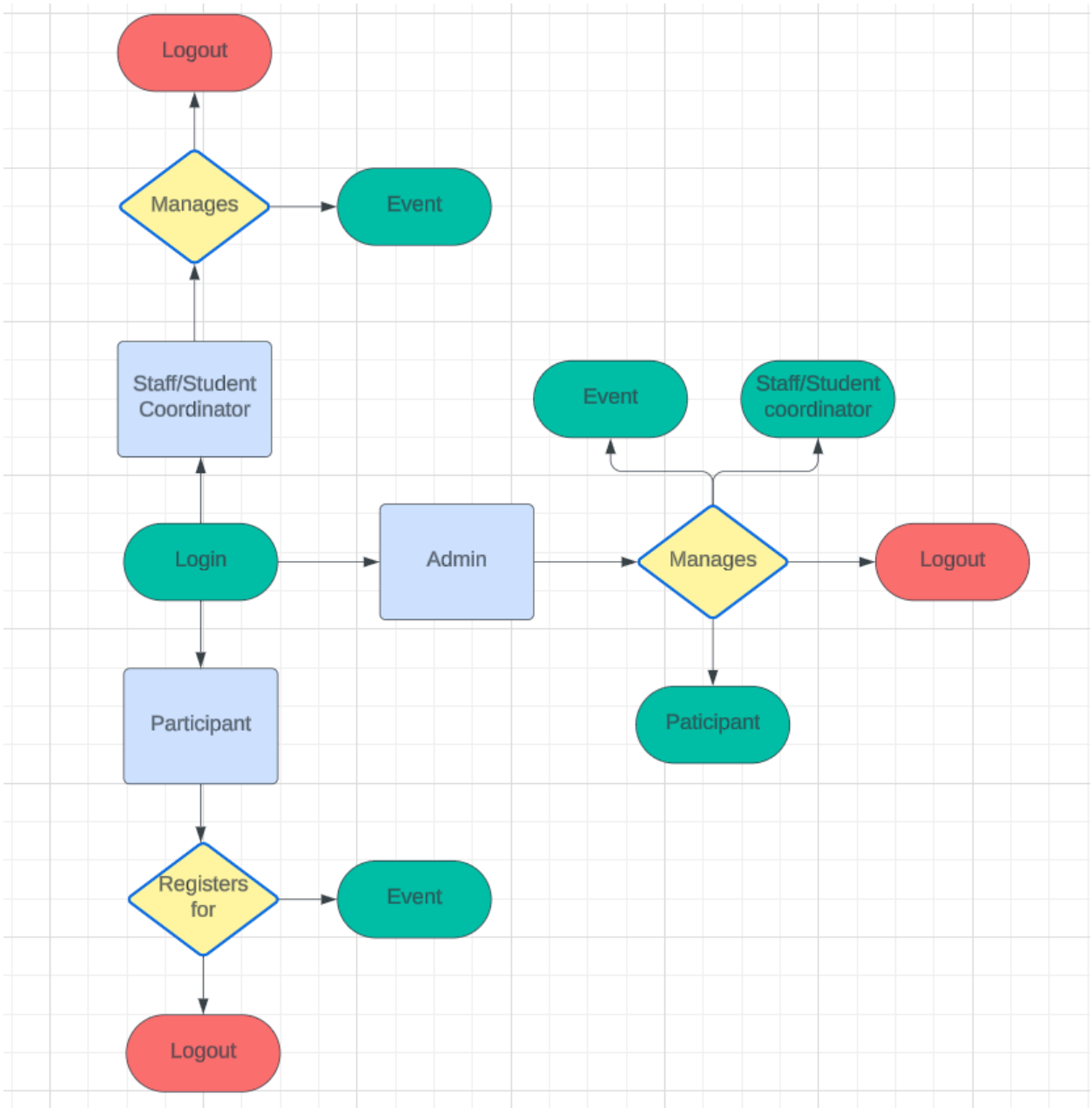
No non-trivial functional dependencies present where the determinant is not a superkey. Already in BCNF.

Schema Diagram:



Chapter 5

Methodology



Chapter 6

Results

Implementing **Festipal** could lead to significant improvements in event coordination and organization across various institutions and organizations. Festipal has the potential to streamline operations, enhance effectiveness, and promote transparency in managing events.

1. **Efficiency:** The adoption of Festipal could streamline event coordination processes, reducing manual effort and processing time. Features such as automated registration, communication tools, and centralized event management could expedite event planning and execution.
2. **Transparency and Accountability:** Festipal could enhance transparency by providing organizers, participants, and stakeholders with real-time access to event information, registration status, and updates.
3. **Environmental Sustainability:** By transitioning to digital event management workflows, Festipal can help minimize paper and material waste, reducing the ecological footprint of events.
4. **Operational Streamlining:** Automation features integrated into Festipal automate repetitive tasks such as event registration. This streamlines administrative processes, allowing organizers to focus on strategic initiatives and enhancing the overall event experience.

In summary, Festipal holds promise for revolutionizing event coordination and organization, potentially benefiting institutions and organizations by enhancing efficiency, transparency, and sustainability in managing events.

Chapter 7

Conclusion and Future Work

7.1 Conclusion

As we close out on our Festipal project, it's evident that we've taken a big step towards reinventing college event management. Festipal has optimized resources, increased sustainability, and streamlined procedures all thanks to creative digital solutions. As we draw to an end, Festipal serves as evidence of our dedication to improving college experiences and creating thriving communities.

7.2 Future Work

1. **Improving User Interface:** Future developments could focus on refining Festipal's user interface to enhance usability and user satisfaction. Iterative design updates and usability testing can ensure that Festipal remains intuitive and user-friendly for all stakeholders involved in event management.
2. **Leveraging Social Media:** Exploring integration with popular social media platforms and marketing tools could amplify event promotion and engagement. By seamlessly integrating with social media platforms, Festipal could facilitate targeted marketing campaigns, event announcements, and attendee engagement activities.
3. **Mobile Application Development:** Enhancing Accessibility: Developing a mobile application companion for Festipal could enhance accessibility and user experience. Through a dedicated mobile app, students, faculty, and event organizers could conveniently manage event logistics, registrations, and communication, thereby improving efficiency and engagement.
4. **Expansion to Other Institutions and Industries:** Broadening Reach: Building on Festipal's success in college event management, there's potential for expansion into other educational institutions and industries. Customizing Festipal to meet the unique needs of businesses, organizations, and community events could extend its impact and adoption beyond college campuses.
5. **Engaging Stakeholders:** Establishing feedback mechanisms and user forums within Festipal could facilitate continuous improvement and refinement. By soliciting input from event organizers, participants, and stakeholders, Festipal can iteratively enhance its features and functionality to address evolving needs and enhance user satisfaction.

6. **Partnerships and Integration with Third-party Services:** Expanding Ecosystem: Exploring partnerships and integrations with third-party services, such as ticketing platforms, catering services, and transportation providers, can enhance the functionality and versatility of Festipal. By offering seamless integrations, Festipal can provide a comprehensive event management solution tailored to the specific needs of college events.

References

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