**A Project Report for Data Base Management System(22CS406PC) On**

**SPORTS MANAGEMENT SYSTEM**

**Submitted to**

**CMRTechnicalCampus,Hyderabad**

**In Partial fulfillment for the requirement of the Award of the Degree of**

**BACHELOR OF TECHNOLOGY**

**in**

**COMPUTER SCIENCE AND ENGINEERING**

**by**

**G.BHAVYA BHARGAVI(227R1A05E4)**

**Under the guidance of**

**M MADHUSUDHAN**

 **Associate Professor**

**DEPARTMENT OF COMPUTER SCIENCE&ENGINEERING**

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**Kandlakoya(V), Medchal(M),Hyderabad-501401**

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**DEPARTMENT OF COMPUTER SCIENCE& ENGINEERING**



**CERTIFICATE**

This to certify that, the Presentation entitled **“SPORTS MANAGEMENT SYSTEM”**being submitted by **G.BHAVYA BHARGAVI** (**227R1A05E4)** in Partial fulfillment for the requirement of the Presentation and for the award of the **Degree of Bachelor of Technology** in **COMPUTER SCIENCE AND ENGINEERING** to the **Jawaharlal Nehru Technological University, Hyderabad** is a record of bonafide work carried out by them under my guidance and supervision during the Academic Year 2023-2024.

The results embodied in this thesis have not been submitted to any other University or Institute for the award of any other degree or diploma.

**<Signature of the supervisor> <Signature of the HOD>  
 M MADHUSUDHAN Dr.K.Srujan Raju  
 Associate Professor Head of the Department**

**<Signature of the Director>  
 Dr.A.Raji Reddy  
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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **LABORATORY REPORT/PROJECT & PRESENTATION** | | | | | | **Problem**  **Statement**  **&**  **Objectives** | **Design & Methodology** | **Implementation**  **&**  **Results** | **Total Marks** | **Final Marks** | | **10** | **15** | **15** | **40** | **10** | |  |  |  |  |  |   **Remarks/Comments by the Faculty:**    **Name of the Faculty**  **:**  **Signature of the Faculty**  **:** |

**ABSTRACT**

The Sports Management System is a comprehensive digital solution designed to streamline and enhance the management of sports activities, events, and resources within organizations. It integrates advanced technology to automate administrative tasks, facilitate efficient communication, and optimize resource allocation. Key features include athlete and team management, scheduling and event coordination, facilities and equipment tracking, and performance analytics. The system provides real-time updates and notifications, ensuring stakeholders stay informed and operations run smoothly. By centralizing data and operations, it improves decision-making processes and enhances overall productivity. The Sports Management System caters to diverse stakeholders including sports clubs, leagues, schools, and universities, offering scalability and customization to meet specific organizational needs. With a user-friendly interface and robust security measures, it fosters collaboration, transparency, and strategic planning in sports management.

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**INTRODUCTION**

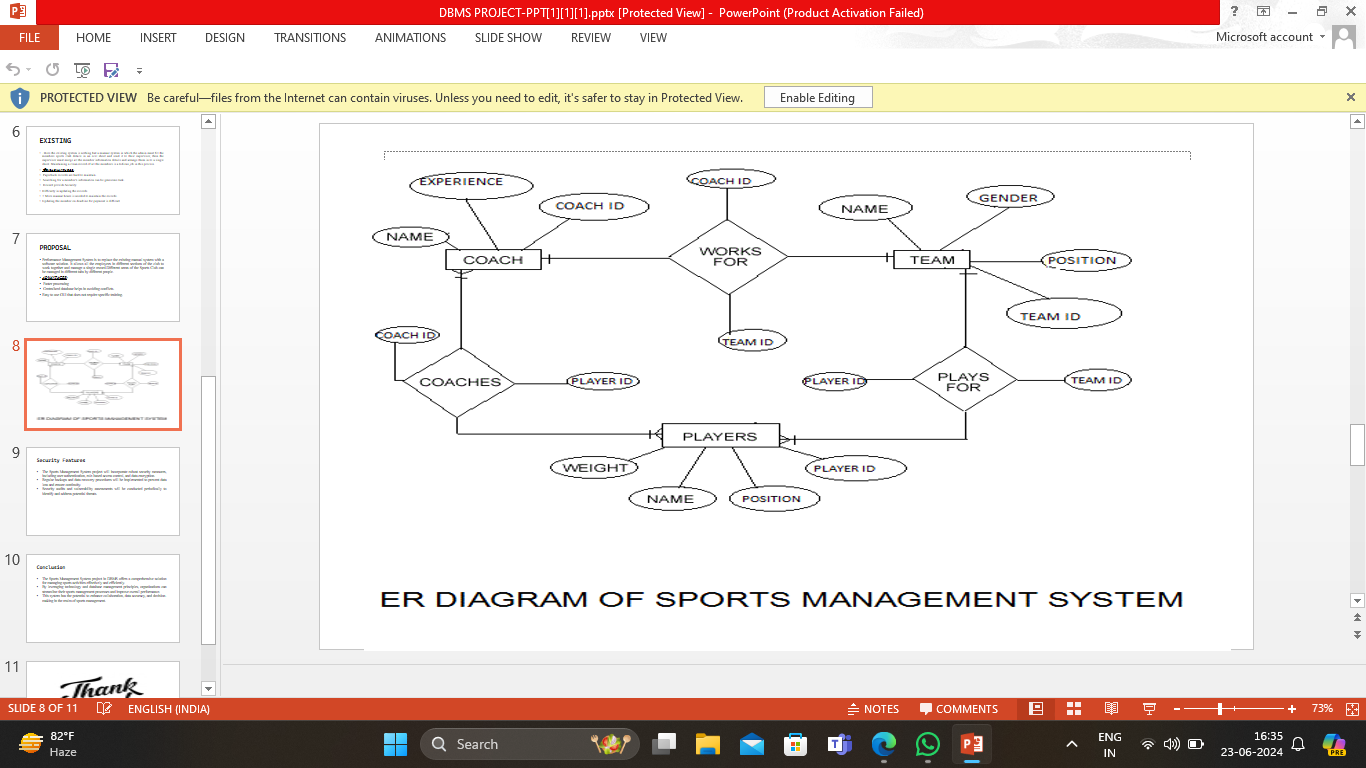
A sports management system is a comprehensive digital solution designed to streamline and enhance the administration, operations, and experiences within sports organizations. From amateur leagues to professional teams, this system integrates technology to optimize various facets of sports management, including scheduling, player and staff management, facility bookings, and financial transactions. It serves as a centralized platform where administrators, coaches, athletes, and fans can efficiently interact and access crucial information in real-time. By automating repetitive tasks and providing data-driven insights, the system improves decision-making processes and enhances overall efficiency. Moreover, it facilitates better communication through instant notifications and updates, fostering stronger team cohesion and engagement. With customizable features to suit diverse sporting needs, a sports management system not only simplifies day-to-day operations but also elevates the quality of sporting experiences for all stakeholders involved. Whether managing logistics, tracking performance metrics, or enhancing fan engagement through digital platforms, this system embodies innovation in sports administration, paving the way for more organized, efficient, and enjoyable sports management practices.

**LITERATURE SURVEY**

Top of Form

A literature survey on sports management systems reveals a growing body of research emphasizing their pivotal role in modern sports administration. Studies highlight their effectiveness in optimizing operational efficiency, enhancing decision-making processes, and improving overall organizational performance. Key themes include the integration of technology to streamline scheduling, player management, and fan engagement, thereby increasing the competitiveness and sustainability of sports organizations. Researchers emphasize the importance of user-friendly interfaces and mobile accessibility in fostering user adoption and satisfaction. Moreover, literature underscores the significance of data analytics in gaining insights into athlete performance, injury prevention, and strategic planning. Emerging trends focus on the incorporation of artificial intelligence and machine learning to further advance predictive analytics and personalized fan experiences. Overall, the literature supports sports management systems as indispensable tools for achieving excellence in sports management through innovation, efficiency, and enhanced stakeholder engagement.

**ANALYSIS AND DESIGN**



**Analysis Phase:**

1. **Requirement Gathering:** Conduct thorough interviews and workshops with stakeholders including administrators, coaches, athletes, and fans to gather functional and non-functional requirements.
2. **Use Case Definition:** Identify key use cases such as player registration, match scheduling, facility management, and financial transactions. Define user roles and their interactions with the system.
3. **Data Modeling:** Develop entity-relationship diagrams (ERDs) and define database schemas to represent data entities like players, teams, matches, facilities, and transactions.
4. **System Analysis:** Evaluate current processes and identify pain points and inefficiencies that the system should address. Consider scalability, security, performance, and integration requirements.

**Design Phase:**

1. **Architectural Design:** Define the system architecture including components like front-end interfaces (web or mobile), back-end servers, databases, and integration with external systems (payment gateways, analytics tools).
2. **User Interface Design:** Create wireframes and prototypes to visualize the user interface (UI) design. Ensure intuitive navigation, accessibility, and responsive design principles.
3. **Database Design:** Implement the previously defined ERDs into a relational database management system (RDBMS) or NoSQL database, optimizing for performance and scalability.

**EXPERIMENTAL INVESTIGATIONS**

Experimental investigations for a sports management system typically involve testing and validating various aspects of the system to ensure it meets functional requirements, performs reliably, and provides a positive user experience. Here are key areas of experimental investigations that would be crucial for a sports management system:

1. **Functionality Testing**: Conducting tests to verify that all features and functionalities specified in the requirements are working as expected. This includes testing user registration, scheduling, player management, payment processing, and reporting capabilities.
2. **Performance Testing**: Assessing the system's performance under different conditions, such as varying numbers of concurrent users or peak load times. Performance tests measure response times, throughput, and resource utilization to ensure the system can handle expected traffic levels efficiently.
3. **Usability Testing**: Evaluating the system's user interface (UI) and user experience (UX) design through usability testing sessions with representative users (administrators, coaches, players, etc.). Feedback is gathered on navigation, ease of use, intuitiveness, and overall satisfaction with the interface.
4. **Security Testing**: Identifying and mitigating potential security vulnerabilities through penetration testing and vulnerability assessments. This ensures that sensitive data (e.g., player information, financial transactions) is protected from unauthorized access and breaches.
5. **Integration Testing**: Verifying seamless integration with external systems or services, such as payment gateways, third-party APIs (e.g., for weather updates or live scoring), and hardware devices (e.g., barcode scanners for ticketing).

**IMPLEMENTATION**

**Asgi.py**import os

from django.core.asgi import get\_asgi\_application

os.environ.setdefault('DJANGO\_SETTINGS\_MODULE', 'SCM.settings')

application = get\_asgi\_application()

**settings.py**

import os

# Build paths inside the project like this: os.path.join(BASE\_DIR, ...)

BASE\_DIR = os.path.dirname(os.path.dirname(os.path.abspath(\_\_file\_\_)))

TEMPLATE\_DIR = os.path.join(BASE\_DIR,"templates")

STATIC\_DIR = os.path.join(BASE\_DIR,"static")

# Quick-start development settings - unsuitable for production

# See https://docs.djangoproject.com/en/3.0/howto/deployment/checklist/

# SECURITY WARNING: keep the secret key used in production secret!

SECRET\_KEY = 'czha6a=ow(iw^4%^orzg$)lo1riu@a(=abn)g(^g1scf8$qt6='

# SECURITY WARNING: don't run with debug turned on in production!

DEBUG = True

ALLOWED\_HOSTS = []

# Application definition

INSTALLED\_APPS = [

'django.contrib.admin',

'django.contrib.auth',

'django.contrib.contenttypes',

'django.contrib.sessions',

'django.contrib.messages',

'django.contrib.staticfiles',

'scmapp',

]

MIDDLEWARE = [

'django.middleware.security.SecurityMiddleware',

'django.contrib.sessions.middleware.SessionMiddleware',

'django.middleware.common.CommonMiddleware',

'django.middleware.csrf.CsrfViewMiddleware',

'django.contrib.auth.middleware.AuthenticationMiddleware',

'django.contrib.messages.middleware.MessageMiddleware',

'django.middleware.clickjacking.XFrameOptionsMiddleware',

]

ROOT\_URLCONF = 'SCM.urls'

TEMPLATES = [

{

'BACKEND': 'django.template.backends.django.DjangoTemplates',

'DIRS': [TEMPLATE\_DIR,],

'APP\_DIRS': True,

'OPTIONS': {

'context\_processors': [

'django.template.context\_processors.debug',

'django.template.context\_processors.request',

'django.contrib.auth.context\_processors.auth',

'django.contrib.messages.context\_processors.messages',

],

},

},

]

WSGI\_APPLICATION = 'SCM.wsgi.application'

# Database

# https://docs.djangoproject.com/en/3.0/ref/settings/#databases

DATABASES = {

'default': {

'ENGINE': 'django.db.backends.sqlite3',

'NAME': os.path.join(BASE\_DIR, 'db.sqlite3'),

}

}

# Password validation

# https://docs.djangoproject.com/en/3.0/ref/settings/#auth-password-validators

AUTH\_PASSWORD\_VALIDATORS = [

{

'NAME': 'django.contrib.auth.password\_validation.UserAttributeSimilarityValidator',

},

{

'NAME': 'django.contrib.auth.password\_validation.MinimumLengthValidator',

},

{

'NAME': 'django.contrib.auth.password\_validation.CommonPasswordValidator',

},

{

'NAME': 'django.contrib.auth.password\_validation.NumericPasswordValidator',

},

]

# Internationalization

# https://docs.djangoproject.com/en/3.0/topics/i18n/

LANGUAGE\_CODE = 'en-us'

TIME\_ZONE = 'UTC'

# DATETIME\_FORMATS = ('%d-%m-%Y')

USE\_I18N = True

USE\_L10N = False

USE\_TZ = True

# Static files (CSS, JavaScript, Images)

# https://docs.djangoproject.com/en/3.0/howto/static-files/

STATIC\_URL = '/static/'

STATICFILES\_DIRS = [

STATIC\_DIR,

]

**Urls.py**

from django.contrib import admin

from django.urls import path

from django.conf.urls import include

from scmapp import views

urlpatterns = [

# path(r'^/',views.index,name='index'),

path('scm/',include('scmapp.urls')),

path('admin/', admin.site.urls),

]

**Wsgi.py**

import os

from django.core.wsgi import get\_wsgi\_application

os.environ.setdefault('DJANGO\_SETTINGS\_MODULE', 'SCM.settings')

application = get\_wsgi\_application()

**initial.py**

from django.db import migrations, models

class Migration(migrations.Migration):

initial = True

dependencies = [

]

operations = [

migrations.CreateModel(

name='Admin',

fields=[

('aid', models.AutoField(primary\_key=True, serialize=False)),

('name', models.CharField(max\_length=20)),

('email', models.CharField(max\_length=40)),

('password', models.CharField(max\_length=20)),

],

),

migrations.CreateModel(

name='Book\_ground',

fields=[

('bid', models.AutoField(primary\_key=True, serialize=False)),

('uid', models.IntegerField()),

('name', models.CharField(max\_length=20)),

('date', models.DateField()),

('time', models.TimeField()),

('mobile', models.CharField(max\_length=10)),

],

),

migrations.CreateModel(

name='Event',

fields=[

('eid', models.AutoField(primary\_key=True, serialize=False)),

('name', models.CharField(max\_length=20)),

('date', models.DateField()),

('time', models.TimeField()),

('duration', models.IntegerField(max\_length=3)),

],

),

migrations.CreateModel(

name='User',

fields=[

('uid', models.AutoField(primary\_key=True, serialize=False)),

('name', models.CharField(max\_length=20)),

('email', models.CharField(max\_length=40)),

('gender', models.CharField(max\_length=6)),

('password', models.CharField(max\_length=20)),

],

),

]

**Auto.py**from django.db import migrations, models

class Migration(migrations.Migration):

dependencies = [

('scmapp', '0001\_initial'),

]

operations = [

migrations.AlterField(

model\_name='event',

name='duration',

field=models.IntegerField(),

),

]

**Admin.py**from django.contrib import admin

from .models import User, Admin, Event, Book\_ground

admin.site.register(User)

admin.site.register(Admin)

admin.site.register(Event)

admin.site.register(Book\_ground)

**apps.py**

from django.apps import AppConfig

class ScmappConfig(AppConfig):

name = 'scmapp'

**models.py**

from django.db import models

class User(models.Model):

uid = models.AutoField(primary\_key=True)

name = models.CharField(max\_length=20)

email = models.CharField(max\_length=40)

gender = models.CharField(max\_length=6)

password = models.CharField(max\_length=20)

class Admin(models.Model):

aid = models.AutoField(primary\_key=True)

name = models.CharField(max\_length=20)

email = models.CharField(max\_length=40)

password = models.CharField(max\_length=20)

class Event(models.Model):

eid = models.AutoField(primary\_key=True)

name = models.CharField(max\_length=20)

date = models.DateField()

time = models.TimeField()

duration = models.IntegerField()

class Book\_ground(models.Model):

bid = models.AutoField(primary\_key=True)

uid = models.IntegerField()

name = models.CharField(max\_length=20)

date = models.DateField()

time = models.TimeField()

mobile = models.CharField(max\_length=10)

**addevent.css**

body{

background-color: #e6e6e6;

}

.header{

margin: 30px 0px 0px 0px;

font-size: 28px;

}

.box , .loginBox{

margin: 30px 0px 30px 0px;

background-color: #fafafa;

color:black;

font-size: 26px;

/\* font-weight: 500; \*/

padding: 40px 0px 40px 30px;

border-radius: 32px;

-webkit-box-shadow:0px 0px 2px 1px #bdbdbd;

}

.box a , .loginBox a{

font-size: 20px;

}

.inputbox{

margin: 12px 0px 0px 0px;

font-size: 18px;

font-weight: 400px;

}

.inputbox span{

margin: 20px 0px 0px 0px;

}

.inputbox input[type=text],input[type=password],input[type=date],input[type=time],input[type=number]{

margin: 4px 0px 20px 0px;

padding: 10px 0px 10px 15px;

width: 300px;

outline: none;

border-radius: 10px;

border-left: 2px solid #e0e0e0;

border-right: 2px solid #e0e0e0;

border-top: 2px solid #e0e0e0;

border-bottom: 2px solid #e0e0e0;

}

input[type=text]:focus,input[type=password]:focus,input[type=date]:focus,input[type=time]:focus,input[type=number]:focus{

border:2px solid #2f9cf1;

}

.inputbox input[type=radio]{

text-align: center;

margin: 0px 0px 25px 30px;

}

input[type=submit],input[type=reset]{

height: 50px;

width: 130px;

background-color: #fff;

outline: none;

border:1.5px solid #2f9cf1;

border-radius: 64px;

font-size: 18px;

color:#2f9cf1;

}

input[type=submit]:hover,input[type=reset]:hover{

background-color: #2f9cf1;

color:white;

}

.footer input{

margin: 15px 10px 0px 10px;

}

**Admin\_event.css**

body{

background-color: #e6e6e6;

}

.header{

margin: 30 0px 0px 0px;

font-size: 28px;

}

.container{

width: 100%;

}

.box{

margin-top: 30px;

margin-bottom: 50px;

background-color: #fafafa;

font-family: 'Roboto';

font-size: 20px;

padding: 30px 40px 30px 40px;

border-radius: 32px;

-webkit-box-shadow:0px 0px 1px 1px #bdbdbd;

}

.box button{

width: 130px;

height: 50px;

margin: 0px;

background-color: #fff;

outline: none;

border:1.5px solid #2f9cf1;

/\* padding: 10 20 10 20; \*/

border-radius: 64px;

font-size: 18px;

color:#2f9cf1;

}

.box button:hover{

background-color: #2f9cf1;

color:white;

}

.box table{

margin:50px 0px 0px 0px;

width:100%;

}

.box td{

padding:15px;

}

.box tr{

font-size: 18px;

}

img{

height: 30px;

width: 30px;

}

img:hover{

background-color: #2f9cf1;

}

.box tr:nth-child(1){

font-size: 18px;

font-weight: 500;

background-color: #a9a9a9;

}

.box tr:nth-child(even){

background-color: #eeeeee;

}

.box tr:nth-child(odd){

background-color: #e0e0e0;

}

.box td:nth-child(4){

text-align: center;

}

.box td:nth-child(5){

text-align: center;

}

.footer{

margin:40px 0px 0px 0px;

height: 50px;

text-align: center;

}

/\* .footer button{

width: 130;

background-color: #fff;

outline: none;

border:1.5px solid #2f9cf1;

padding: 10 20 10 20;

border-radius: 64px;

font-size: 18;

color:#2f9cf1;

}

.footer button:hover{

background-color: #2f9cf1;

color:white;

}

.footer a{

color:black;

} \*/

**Main.js**  
function navigation(event) {

var reg = document.getElementById('registration');

var login = document.getElementById('login');

var reg\_box = document.getElementsByClassName('box')[0];

var login\_box = document.getElementsByClassName('loginBox')[0];

var x = event.target;

if(x.id == 'registration' || x.id == 'regLink'){

reg.classList.add('myactive');

login.classList.remove('myactive');

reg\_box.style.display='block';

login\_box.style.display='none';

}

if(x.id == 'login' || x.id == 'loginLink'){

reg.classList.remove('myactive');

login.classList.add('myactive');

reg\_box.style.display='none';

login\_box.style.display='block';

}

}  
**addevent.html**<!DOCTYPE html>

{% load static %}

<html>

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta http-equiv="X-UA-Compatible" content="ie=edge">

<title>SCM | Add Event</title>

<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/css/bootstrap.min.css">

<!-- <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/materialize/0.100.2/css/materialize.min.css"> -->

<link href="https://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">

<link href="https://fonts.googleapis.com/css?family=Roboto+Mono:400,500,700&display=swap" rel="stylesheet">

<link href="https://fonts.googleapis.com/css?family=Open+Sans&display=swap" rel="stylesheet">

<link href="https://fonts.googleapis.com/css?family=Muli:500&display=swap" rel="stylesheet">

<link rel="stylesheet" href="{% static 'css/add\_event.css' %}">

</head>

<body>

<div class="container-fluid header text-center">

Manage Event

</div>

<div class="container-fluid">

<div class="row justify-content-center">

<div class="col-lg-6 box">

Add Event

<div class="row justify-content-center">

<div class="col-lg-6">

<div class="inputbox">

<form action="{% url 'scmapp:db\_add\_event' %}" method="post">

{% csrf\_token %}

Name of event<br>

<input type="text" name="name" autocomplete="off" required><br>

Date<br>

<input type="date" name="date" autocomplete="off" required><br>

<input type="reset" value="Reset" name="submit">

<input type="submit" value="Add" name="submit">

</div>

</form>

</div>

</div>

</div>

<a href="{% url 'scmapp:admin\_event' %}">Back</a>

</div>

</div>

</div>

</body>

</html>

**Manage.py**

#!/usr/bin/env python

import os

import sys

def main():

os.environ.setdefault('DJANGO\_SETTINGS\_MODULE', 'SCM.settings')

try:

from django.core.management import execute\_from\_command\_line

except ImportError as exc:

raise ImportError(

"Couldn't import Django. Are you sure it's installed and "

"available on your PYTHONPATH environment variable? Did you "

"forget to activate a virtual environment?"

) from exc

execute\_from\_command\_line(sys.argv)

if \_\_name\_\_ == '\_\_main\_\_':

main()

**TESTING / DEBUGGING RESULTS**

**CONCLUSION**

In conclusion, the sports management system represents a pivotal advancement in enhancing the operational efficiency and overall experience within sports organizations. By integrating robust analysis and meticulous design, this system addresses diverse stakeholder needs—from administrators to athletes and fans—effectively streamlining operations such as scheduling, player management, and facility bookings. Its user-centric approach ensures seamless interaction through intuitive interfaces and real-time updates, fostering better communication and collaboration.

Moreover, the system's ability to automate tasks and provide insightful analytics not only improves decision-making but also enhances resource allocation and strategic planning. As sports continue to evolve, this digital solution stands at the forefront of innovation, facilitating smoother administration, heightened engagement, and elevated performance standards across the board.

Ultimately, the sports management system exemplifies how technology can revolutionize sports management practices, promoting efficiency, transparency, and a more enriching experience for all involved. It sets a new standard in organizational effectiveness and lays the foundation for continued advancement in the dynamic world of sports management.

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