

Cloud-based Event Planning System Using Salesforce

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ABSTRACT:

In today's fast-paced world, organizing and managing events can be a daunting task, especially when it comes to handling large amounts of data. To address this challenge, we have developed an Event Management System using Salesforce, a powerful and customizable cloud-based platform.

The system we have designed will allow organizations to manage their events more efficiently, from creating and managing events to handling attendee registration and ticketing. Using Salesforce, we have created a system that will store data in a well-formatted and organized manner, reducing the chances of duplicates and errors.

In this project, we will explore the architecture and design of the system, including its key features and functionalities. We will also discuss the implementation process and any challenges we encountered during development.

The system we have developed will provide a seamless and convenient experience for attendees, with easy-to-use registration and ticketing processes. Additionally, organizations will benefit from the system's ability to track and analyze attendee data, allowing them to make informed decisions and increase revenue.

In conclusion, an Event Management System using Salesforce offers a powerful solution for managing events, improving efficiency, and enhancing attendee experiences. Through this project, we aim to provide a comprehensive understanding of how such a system can benefit organizations and how it can be customized to meet their specific needs.

KEYWORDS: Salesforce CRM , Apex , Validation rules , Triggers , OWD Sharing Setting , profiles , Permission set , Site Login , Duplicate Rules Relationships in Salesforce ,Content Management System.

INTRODUCTION:

Organizing a successful event requires careful planning and execution, especially when it comes to managing the associated data. In today's world, data is incredibly valuable and can help businesses increase revenue by identifying which events are the most profitable. Traditionally, people would manage event data using spreadsheets, which was time-consuming and prone to errors. To streamline this process and improve data management, we propose an Event Management System using Salesforce, which will enable organizations to manage event details, send event passes to attendees, and view data in an easy-to-use dashboard. By using Salesforce, we can ensure that the data is stored in a well-formatted manner and eliminate the risk of duplication.

Salesforce is an excellent choice for custom relationship development because it has a wealth of functionalities that can be customized according to business needs. While spreadsheets are limited in

their ability to provide a full picture of the business, Salesforce has a rich interface and a powerful database that can provide a comprehensive view of the organization. Additionally, we have implemented a content management system (CMS) to enable attendees to store data in a user-friendly way through a custom website. The system will display upcoming event data, speaker data, and attendee data on an attractive dashboard.

Our main goal is to make event management as easy as possible while providing high-quality data that is free from duplicates and redundancy. We also aim to provide an excellent interface for users to register for events quickly and efficiently.

System Design:

The system consists of several key components that work together to provide a seamless experience for event management and data analysis. The custom objects are at the core of the system, providing a flexible data model that can be adapted to meet the specific needs of the organization. Validation rules ensure that the data entered the system is accurate and consistent, while duplicate rules prevent data redundancy.

The CMS allows attendees to store data in a user-friendly way through a custom website. This data is then processed and displayed on an attractive dashboard that provides a comprehensive view of the event and attendee data. The dashboard is fully customizable and can be tailored to display the KPIs that are most relevant to the organization.

The attendee registration process is also easy and efficient, with a custom web page that allows users to register for events quickly and easily. Once registered, attendees will receive their event passes in a well-formatted manner that contains all the relevant information about the event.

Literature Review:

"Event Management System Using Salesforce" project shows that event management is a critical aspect of businesses today. According to a report by MarketsandMarkets, the global event management software market size is expected to grow from USD 6.4 billion in 2019 to USD 11.4 billion by 2024, at a Compound Annual Growth Rate (CAGR) of 12.4% during the forecast period. This growth can be attributed to the increasing need for streamlining event planning and execution processes.

Traditional methods of managing event data using spreadsheets are not only time-consuming but also prone to errors. In contrast, cloud-based event management systems have been gaining popularity due to their ability to automate the process and eliminate manual errors. Salesforce, one such cloud-based platform, is highly customizable and provides a wide range of functionalities to meet the needs of different businesses.

A study by Aberdeen Group found that companies using CRM (Customer Relationship Management) systems like Salesforce experience an average of 27% increase in lead conversion rates, 22% increase in sales productivity, and 24% reduction in sales cycle time. This data highlights the importance of using a platform like Salesforce for event management, as it can lead to increased efficiency and revenue generation.

In addition to Salesforce, content management systems (CMS) have become essential tools for event management. A CMS allows businesses to create and manage digital content, including website content, and can be used to build customized event websites for attendees. This approach can lead to a better attendee experience and increased engagement.

Validation and duplicate rules are also important components of an event management system. Validation rules ensure that data entered into the system meets certain criteria and prevents data entry errors. Duplicate rules prevent the creation of duplicate records in the system, ensuring data accuracy and completeness.

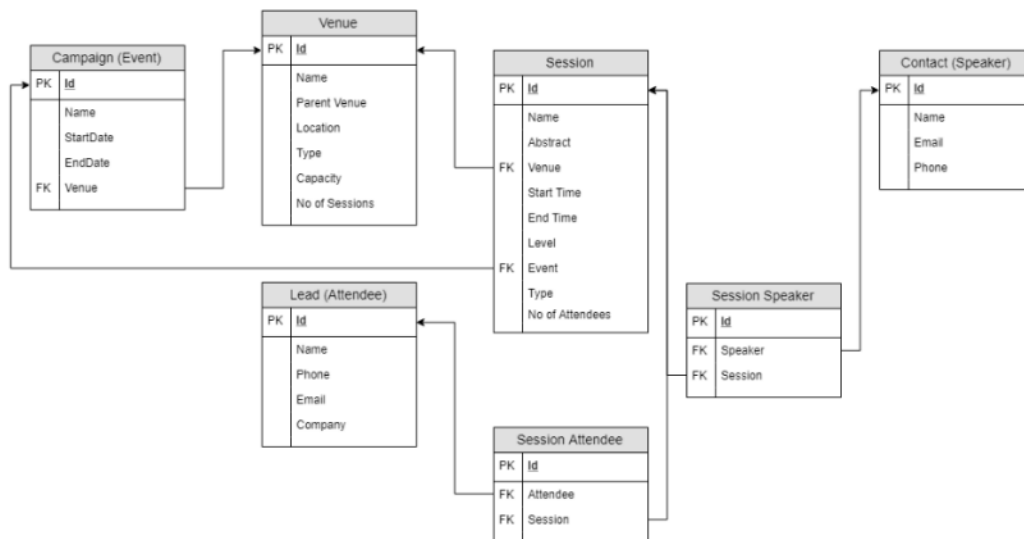
In conclusion, the literature review indicates that event management is a critical aspect of business operations, and cloud-based platforms like Salesforce and content management systems can greatly enhance the efficiency and effectiveness of event management. The use of validation and duplicate rules ensures data accuracy, completeness, and eliminates manual errors.

FEATURES COVERED:

The following features will be covered in this Project –

1. Schema : Objects, Fields, Validation Rules & Relationships
2. Automation : Workflows/Processes, Flows
3. Analytics : Reports & Dashboards
4. Development : Apex, Visualforce

Entity Relationship Diagram(ERD):



USERS

The two primary users of the App will be –

1. Event Manager
2. Session Coordinator
3. Attendee
 - The event manager will be able to see and modify all the data while the session coordinator will only be able to see the sessions owned by them.
 - Both Event Managers and Session Coordinators must be able to see all attendees

Schema

Every App needs a place where it can store data. When it comes to Salesforce, we use objects (Standard or Custom) to store the data as records. John was told that at an high level, the organizers should be able to capture the following information –

1. As an organizer, I should be able to store the information about the event which includes the name of the event, start date, end date and the venue.
2. As an organizer, I should be able to store the information about the venue which includes the name of the venue, the location, the capacity, the type of the venue and the parent venue.
 - a. The organizers should be able to choose the type from a set of predefined values - City, Hotel/Convention Centre, Hall.
3. As an organizer, I should be able to store information about the sessions.
 - a. An organizer should be able to choose a level from a set of predefined values - Beginner, Intermediate, Advanced.
 - b. A session would typically store the following information –
 - c. An organizer should be able to choose a type from a set of predefined values - Workshop, HoT, Keynote and Session.
 - i. Name
 - ii. Abstract
 - iii. Venue
 - iv. Start Time
 - v. End Time
 - vi. Level
 - vii. Type
 - viii. Event
4. As an organizer, I should be able to store information about the speakers that includes the Name, Email and Phone Number.
5. As an organizer, I should be able to store the information about the attendees that includes - Name, Email, Phone Number and Company.

Apart from the above, the organizers have also put forward some additional fields that needs to be auto calculated. These include –

1. As an organizer, I should be able to see the number of sessions happening at a venue.
 - a. This should be an auto calculated field and should be updated when a session is either created, updated or un-deleted.
 - b. 2. As an organizer, I should be able to see the number of attendees attending a given session.
2. The organizers emphasised that –
 - i. An attendee should be able to attend more than one session at a time.
 - ii. For a given session, there could be more than one speaker.

DATA INTEGRITY RULES

Data can be qualified as usable and reportable only if it is appropriated. The organizers were quite stringent about this. They had put forward the following restrictions –

1. Event Managers should not be able to create an Event with start date greater than the end date.
2. Session Coordinators should not be able to create sessions with start time greater than the end time.
3. An attendee cannot register for the same event twice.
4. An attendee cannot register for parallel events (Events happening at the same time/overlapping events).
5. Attendees should not be able to register for a session if the capacity for the venue has been exhausted. Capacity includes defined capacity + waitlist.

ADDITIONAL LOGIC REQUIREMENT:

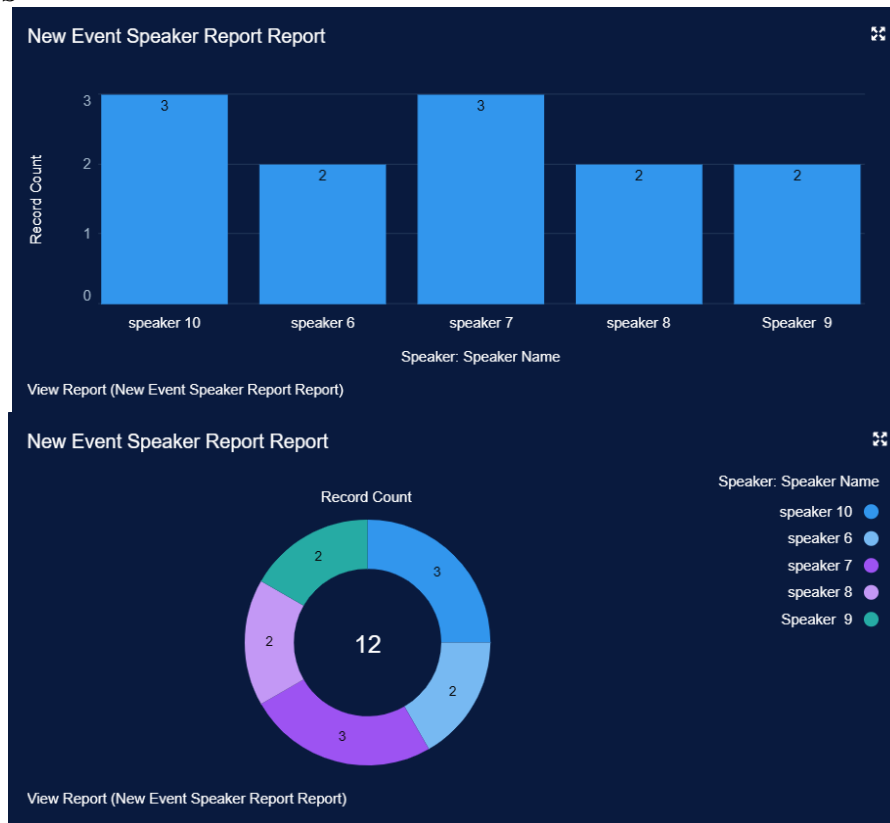
Each Session has a predefined waitlist threshold (max 10). If the session capacity is full, further attendees are added to the waitlist until the waitlist threshold is reached. If any attendee removes the session from their agenda, the first one from the waitlist automatically gets confirmed.

BUSINESS PROCESS AUTOMATION :

The organizers had also asked John to setup some business process automation. This includes –

1. As a session coordinator, I should be notified when a new session has been assigned to me.
2. As a session coordinator, I should be notified when the number of attendees attending a session has reached the capacity (capacity + waitlist) of the hall.
3. As an attendee, I must receive an email whenever a session has been added or removed to my agenda or has been confirmed from the waitlist .
4. Two hours before the start time of a session, the speakers must receive a reminder email with count of attendees, and venue/hall details.
5. As a session coordinator, I should be able to see post on the sessions chatter feed when speakers have been allocated for the session.

ANALYTICS



INTEGRATION REQUIREMENTS:

Attendees can express their interest in the event by registering through a web form. For the sake of simplicity, let's assume they put their session interests in the comments field, and the Session Coordinators add their attendance to the respective Sessions using an Agenda Builder (described in the UI Requirements section below). Once an attendee record is created in the system, it must be assigned to a queue of Session Coordinators.

Salesforce App Builder :

Salesforce App Builder is a tool that allows users to build custom applications on the Salesforce platform without the need for coding skills. This tool enables users to create custom objects, fields, and relationships, and design custom pages, components, and applications.

1. Customizing Salesforce Apps with App Builder: This topic covers how to customize Salesforce applications using the App Builder. You can explore how to create custom pages, components, and applications, and how to add custom fields and objects.
2. Creating Custom Objects and Fields with App Builder: This topic covers how to create custom objects and fields using the App Builder. You can explore how to define object relationships, data types, and picklists, and how to create validation rules and custom page layouts.
3. Building Custom Pages and Components with App Builder: This topic covers how to build custom pages and components using the App Builder. You can explore how to use Lightning components, Visualforce pages, and custom JavaScript to create custom pages and components.
4. Integrating External Data with App Builder: This topic covers how to integrate external data with Salesforce applications using the App Builder. You can explore how to use External Objects and Lightning Connect to integrate data from external sources, such as databases and web services.
5. Deploying Custom Applications with App Builder: This topic covers how to deploy custom applications built using the App Builder. You can explore how to use the Salesforce AppExchange to publish and distribute custom applications, and how to use Salesforce DX to manage application development and deployment.

Future Scope:

1. Integration with other systems: The event management system could be integrated with other systems, such as social media platforms or email marketing tools, to increase its functionality and reach.
2. Mobile application development: A mobile application could be developed to allow attendees to access event information, register for events, and receive notifications on their mobile devices.
3. Advanced analytics and reporting: The system's dashboard and reporting capabilities could be enhanced to provide more detailed insights into event attendance, revenue, and attendee behaviour.
4. Automation: The system could be further automated with the use of workflows and triggers to streamline event management processes.
5. Enhanced user experience: The system's user interface could be improved to provide a more intuitive and user-friendly experience for both event organizers and attendees.
6. Customization: The system's customization options could be expanded to allow for more flexibility in meeting the unique needs of different types of events and organizations.

Conclusion:

Event Management System Using Salesforce" project can be concluded as a comprehensive solution for managing events with the help of the Salesforce platform. The project aims to simplify the event management process by automating tasks, reducing data duplication, and providing rich user interfaces and dashboards for event organizers and attendees.

The project uses various features of Salesforce such as custom objects, validation rules, duplicate rules, and dashboards to provide a customized solution for event management. The use of a content

management system (CMS) allows attendees to store their data on a custom website with a rich user interface.

The project has the potential for further development, such as integrating with other systems, developing a mobile application, and enhancing analytics and reporting. The project's customization options could also be expanded to meet the unique needs of different types of events and organizations.

Overall, the "Event Management System Using Salesforce" project provides a scalable, flexible, and efficient solution for event management, which can help organizations save time and effort while improving their event management processes.

References:

1. L. McCathie and K. Michael, "Is it the End of Barcodes in Supply Chain Management?", Proceedings of the Collaborative Electronic Commerce Technology and Research Conference LatAm, 2005.
2. M. Mahalakshmi, S. Gomathiand, S. Krithika, "Event Management System", 2016.
3. Sandeep Misal, Segar Jadhav, Tushar Jore, Archana Ugale, "Event Management System".
4. Roozbeh Derakhshan, Maria E. Orłowska and Xue Li, "RFID Data Management: Challenges and Opportunities", IEEE International Conference on RFID, 2007.
5. McDonnell, I., Allen, J. and O'Toole, W. (1999) Festival and Special Event Management, John Wiley and Sons, Milton. M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989.
6. Saranya, P., and S. Prabakaran. "Automatic detection of non-proliferative diabetic retinopathy in retinal fundus images using convolution neural network." Journal of Ambient Intelligence and Humanized Computing (2020): 1-10.
7. Shaban, Mohamed, et al. "A convolutional neural network for the screening and staging of diabetic retinopathy." Plos one 15.6 (2020): e02335.