

Smart Go-Kart System with using Conversational Dialog Engine

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Abstract: In this paper we propose a Go-Kart Management System. This system which is based on Go-Kart event management and provide the functionality through the system. This system allow user to register into the system and registered user allow to login to the system. This web based application introduce to organize the activities regarding go-karts event like participation in Go-Kart, building electric or general go-karts, team activity, performance, etc. Through system, user can allow to participate in ongoing race event or proposing the Go-Kart Vehicle Design. The database stores all of the user's informations as well as their communications.

Keywords: User, Admin, Event, Chatterbot, Conversational Dialog Engine Chatbot.

I. INTRODUCTION

In today's world everything is being online and present in digital way which saves our time and effort as well. Similarly, Go-Kart is the web application which provide online platform for the Go-Kart events and its management. It is the application which is applicable for the individual colleges. Student will register on Go-kart platform and build their profile, Go-Kart manage all data regarding user perceptions and it stores and updating all the information about the live events of Go-Kart. The system will handle by the admin who is observer as well provider. Admin can access and provide all data and also keep track on the participant live activities regarding those projects. This platform is intended to remain simple and powerful to connect student with the head of Go-Kart organizer and with respect to their college.

II. LITERATURE SURVEY

In a various colleges, they have their college team who works on the Go-Kart project for its designing and manufacturing. So each college having head of this event who need to manage the student manual registration and project document and information provide regarding Go-Kart development and how to design, etc. Head of this event have to collect the information of various Go-Kart live event time to time and notify same to the student manually. For the instruction and updates, head needs to present physically to guide the student. Head required all the status regarding project task in documental way.

III. PROPOSED WORK

Go-Kart system is a web based application which can be used or implemented for College level or University level to fulfill the current growth enhancement in electrical vehicle development and designing competitions. This system can be used for any organization who conduct this event as a software. The student or user get all the information resources at a single place through which using system become an effective in case of time and also cost of the user.

1. Module Description

Admin Login:

The system having unique or single operator who work on to provide essential needs to the student or user with respect to events, project development and manage the other requirement. Admin can view or analyze the student performance with respect to their project work and this performance data share with the user as well as their head. So they can improve their performance. Also admin can update the information on the system and provide the effective communication between student/users and seniors

/professors.

Management Login:

The system have management login which introduce with respect to type of the go-kart. This module can be operated by college professors or seniors to help the student in Go-Kart project development. In Go-Kart, it contain three types of go-kart management i.e. General Go-Kart, Baha Go-Kart and Supra Go-Kart. So all divisions of Go-Kart have their management i.e. Guides, Professors and Senior as well. The college student/user can contact with them through the chat system or provided contact details.



User Login:

This module belongs to student or participants who participate to go-kart system. All the features provided to the user and they can participate the event which schedule or conduct by the different organization or college. The student or participant can register for any type of go-kart with respect to their domain and skills.

2. CLASS DIAGRAM:

The system have given class diagrams to show its basic module design relation-

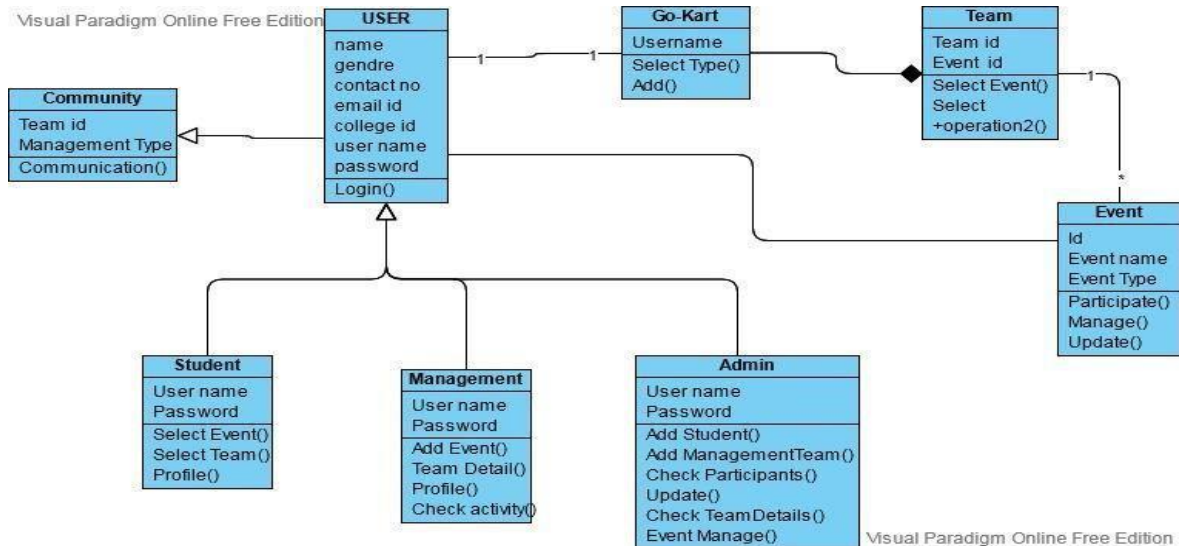


Fig 1. Class Diagram for Go-Kart System

3. DFD DIAGRAM:

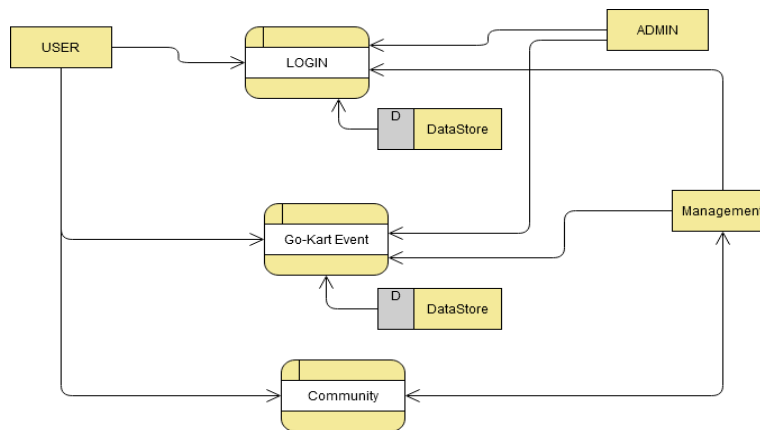


Fig 2. Data Flow Diagram for Go-Kart System

4. Community:

This module of the system provide the essential part of communication between student and management team through which student are stay updated regarding development of Go-Kart system and its designation. The management team have teachers, professors or seniors students. Through system, the student can put up their queries or doubt and management team with respect to the selected go-kart type, team will help in development. Student will get the good posture to enhancement in skilland technical aspect.

IV. SYSTEM ALGORITHM

1. Conversational Dialog Engine:

Conversational dialog engine is description of ChatterBot. ChatterBot is a Python library that allows creating automated responses to user input easy. ChatterBot generates various types of responses using a variety of machine learning algorithms. This makes it simple for developers to build chat bots and automate user interactions.



Example- user: Good morning! How are you doing?
bot: Thank you for asking, I am doing very well.
user: You're welcome.

ChatterBot can be taught to speak any language because of its language-independent nature. Furthermore, since ChatterBot is based on machine learning, an agent instance will enhance its knowledge of potential responses as it communicates with humans and other sources of data.

ChatterBot is a Python library that makes it simple to build conversational applications. A ChatterBot instance that has not been educated has no idea how to communicate. When a user makes a message, the library saves the text that they entered as well as the text that the statement was in response to. The number of responses ChatterBot can provide and the accuracy of each answer in relation to the feedback will increase as it receives more data. The program considered the closest matching response by searching for the closest matching known statement that matches the input, it then chooses a response from the selection of known responses to that statement. ChatterBot works as following process flow-

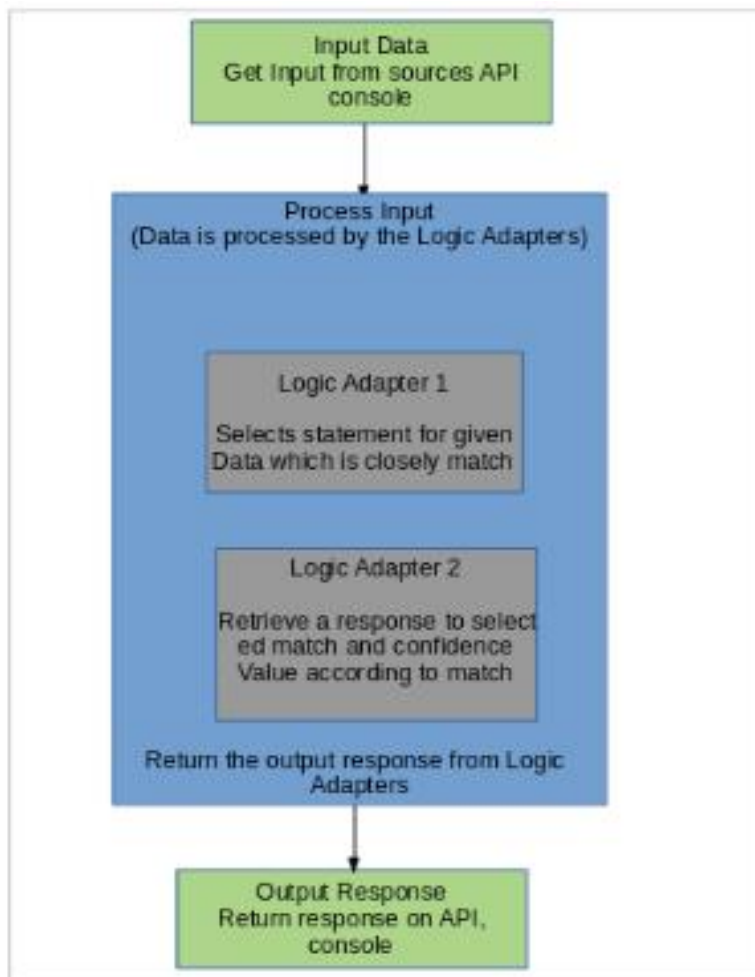


Fig 3. Process Flow Diagram

V. ADVANTAGES

1. Reduce the manual work.
2. It reduce time and efforts for students.
3. Data can be secured under College or Organization.
4. Saves time in management event and increase in productivity.



5. Efficient communication can occurs.

VI. APPLICATIONS

1. Go-Kart system can be used in colleges or under the university .
2. Using application, it can easily create the project group/team and assign seniors and faculty to that group.
3. Participants performance will be evaluated by expertise and generate its task performance reports.
4. It's best application to be updated with all live events through the application and also the management keep track on every team and their project.

VII. CONCLUSION

In this project, we develop and implemented the Go-Kart system which is a web portal through which students of the Mechanical Engineers, Electrical Engineers and Electronics Engineer are participate in Go-Kart vehicle development and design at one place. Because in today's world, electric vehicle are widely used. So the system creates the efficient collaboration between the teams and organize event by college or any other organization to enhance the skill of students.

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