

ABSTRACT

Track Management is a system which is designed to efficiently manage various aspects of a race track's operations. It includes features such as trackday scheduling and organizing track days, registration of riders and track slot reservation. The track slots reservation are done on the basis of previous track timing of their own. Slots are categorized into three: Beginner, Intermediate and Pro. This helps to avoid accidents in track. Another bike /car companies can register their best performing riders to provide an opportunity to ride with the riders of the track. This helps to improve riders performance by helping each other.

USERS

Admin

Admin can add, edit, delete the schedule of track day. Admin can add/edit the categories/levels of riders as : Beginner, Intermediate, Pro. Admin can set the limit of riders for each level. Admin can control rider's information and their track time. Admin can add /edit rental vehicle Information.

Staff

The staff can update the track time of each rider. Staff provides the rental services of car/bike for riders. Staff has the control to manage the booking of slots based on the rider's personal best track time. If the rider is a new rider, he will be firstly added to beginner's level. After tracking his personal best time, he will be categorized into respective category. Staff controls the rental services and slot reservation.

Rider

Rider can register to ride by filling the registration form which contains their name, date of birth, driving license, selection of rental/own vehicle. Rider can select the days which they can attend track days. (Maximum 2 days are usually trackdays are conducted). Rider can select the level of category (If the rider is new, he/she can only select beginner slot). If the rider has older track times, then system will automatically select the level based on their personal best time.

Company Registration

Vehicle companies can register their team consist of their best performing riders to experience trackday with the team of best performing another company or riders. The main intention of this is to provide an opportunity to various company's best riders to improve their riding experience. Company team should use their own company's vehicle. eg: Yamaha Company team should use Yamaha bikes.

Technologies

- Payment
- Feedback using AI, ML.
- 360 view (AR) of car/bike rental
- Setup an emergency response system with medical facilities, evacuation plans.

- Track Monitoring System : Utilizing sensors and cameras to monitor track conditions and safety hazards in realtime.

Mini Project

- Admin: Add Scheduling, add categories, Set limit of each levels.
- Staff: Tracktime updation, Slot assigning.
- Rider: Registration, Schedule selection, Slot selection, Vehicle selection(rent/own).

Main Project

Rental services, Payment, Company's registration, Technologies.

References

<https://www.yamaha-motor-india.com/trackday-campaign.html>