# REQUIREMENT ANALYSIS AND FEASIBILITY

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**ARMCO RACE TRACK MANAGER**

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## Project Overview?

RaceTrack 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 trackdays, registration of riders and track slot reservation. The track slots reservation are done in 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. Vehicle and Riding Gears rental services are also provided. Bike/car companies can register their best performing riders to provide an opportunity to ride with the other riders. This helps to improve rider's performance by helping each other.

## To what extend system is proposed for?

In our website we provide riders to register for trackday and rental services of riding gears & vehicle online. We also give riders 360-view of the rental vehicle & riding gears so that riders can supervise their preferred vehicle & riding gears virtually.

## Specify the viewers/public involved in the system?

In this system the viewers are the riders and motorsport companies those who came to book their trackday.

## List modules included in your system?

In my system there are four modules: -

## 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. Admin provides details for fresher's orientation class.

## Staff

The staff can update the track time of each rider. Staff provides the rental services of car/bike and riding gears 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, riding gears are also taken from rental. Rider can select the days which they can attend trackdays(Trackdays are maximum 2 days).Rider can select the level of riding (If the rider is new, they can only select beginner slot).If the rider has older track times, then system will automatically selects the level based on their personal best time.

## Company

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.

## Who owns the system?

The system is owned my developer as this project is just on academic basis. It is now not in use for commercial purpose that's why there is no specific owner rather than developer.

## System is related to which firm/organisation/industry?

The system is related to Racetrack company which mainly focuses on to developing riding skills to properly control the vehicle in any situation. It also helps the riders define the massive distinction between road and track riding styles and as a result, through improved skill levels and attitudes, riders can have a positive effect on their road safety.

## In this system which technology is acquired?

In this system/website I has used many technologies:

**Frontend:** HTML/CSS

**Backend:** Django

**Advance Technology:**

Track Monitoring System

Payment

Feedback

360 view (AR)

## Details of person that you have contacted for data collection?

I have contacted people who had attended trackdays. I collect all the details required for my project that how the trackday is conducted and information about their available services they provide. And I refer some videos about trackdays.

## Problems faced by existing system?

In existing system, there is only option for trackday booking they don't provide services such as: online vehicle & riding gears rental, company's trackday booking, 360 view of rental items, track monitoring system.

# FEASIBILITY STUDY

**Feasibility** is defined as the practical extent to which a project can be performed successfully. To evaluate feasibility, a feasibility study is performed, which determines whether the solution considered to accomplish the requirements is practical and workable in the software. Information such as resource availability, cost estimation for software development, benefits of the software to the organization after it is developed and cost to be incurred on its maintenance are considered during the feasibility study. The results of the feasibility study should be a report that recommends whether it is worth carrying on with the requirements engineering and system development process.

If a system does not support the business objectives, it has no real value to the business. While this may seem obvious, many organisations develop systems which do not contribute to their objectives either because they do not have a clear statement of these objectives, because they fail to define the business requirements for the system or because other political or organisation factors influence the system procurement.

The main **objective of feasibility** is:

- To analyse whether software will meet organisational requirements.
- Whether software can be implemented with current technology and it can be made under provided budget and schedule.
- To determine whether software can be integrated with existing software.

There are mainly **three types** of feasibility:

- Technical feasibility
- Operational feasibility
- Economic feasibility

A.) **Technical feasibility: -** In this feasibility we will check whether the software, technology, system environments used by us can satisfy the organisational requirements with given budget and time.

It follows some questions:

1. **Do the stakeholders have the expertise needed?**

As it is an academic project there is no organisation or company it means there is no need of stakeholders or expert professionals. The technology used by me is guided by my scrum master which will help me to become an expert.

2. **Are additional resources needed in the system including infrastructure, skill- sets or job-aids?**

As it is an academic project so there is no need of infrastructure in big amount and there is no chance of job-aids until and unless I make it as a professional project.

I just need resources which is available from internet and rest is guided by my scrum master which will help me to increase my skill-set.

3. **Is the system ready in terms of technology required?**

Yes, my system is ready in terms of technology required because the programming language I am going to use supports mostly all types of technology very easily, it is very compatible and interoperable.

My website is implemented using:

- Frontend: HTML/CSS
- Backend: Django

In my website, I use different technologies like Track monitoring system,payment feedback,360 view (AR).

B.) **Operational feasibility:** assesses the extent to which the required software performs a series of steps to solve business problems and user requirements. This feasibility is dependent on software development team and

involves visualizing whether the software will operate after it is developed and be operative once it is installed.

It follows some questions:

1. **Do existing system procedures and protocols support the new services?**

Yes, the software selected by me as a part of academic project supports all types of procedures and protocols. Which will help me to use new services or technology which will make my project more user friendly.

2. **How will the collaborators be involved?**

As it is a part of academic project so there is no need of collaborators. All the work is done by me with guidance and surveillance of my scrum master. As my website is very user friendly so customers or vendors do not need specific training to get familiar with my website

C.) **Economic feasibility:** determines whether the required software can generate financial gains for an organization. It involves the cost incurred on the software development team, estimated cost of hardware and software, cost of performing feasibility study, and so on.

It follows some questions:

1. **Do the resources needed exist?**

Yes, the resources needed by system to fulfil the organisational requirement exists in most advance form.

2. **Will the proposed services or initiative led to better use of resources to improve the outcomes. When compared with other options?**

The proposed services or requirements will utilize the resources efficiently so that desired outcomes can be acquired. The technology used by me supports all types of features and functions which compare to other technology is complicated to implement.