

# Marketing Data Analysis and Tracking System

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**Abstract:** A marketing system is a combination of people, technologies and processes for managing marketing information. Marketing is very helpful in transfer, exchange and movement of goods. Goods and services are made available to customers through various intermediaries via wholesalers and retailers etc. Marketing is helpful to both producers and consumers.

Now-a-days many companies sell their product through marketing personnel's working on the field. Consider by taking an example of pharmaceutical industry, they have many marketing personnel's working on the field. The marketing evaluation process is done by manually. To analyze and track these persons is very difficult weather they are working efficiently or not. Data analysis is a process that begins with retrieving data from various sources and then analyzing it with the goal of discovering beneficial information. Basically analysis refers to breaking a whole into it separate component for individual examination.

**Keywords:** GPS, Marketing Representative.

## 1. Introduction

A marketing system is a combination of people, technologies and processes for managing marketing information. Marketing is very helpful in transfer, exchange and movement of goods. Goods and services are made available to customers through various intermediaries via wholesalers and retailers etc. Marketing is helpful to both producers and consumers. Now a day many companies sell their product through marketing personnel's working on the field. Consider by taking an example of pharmaceutical industry, they have many marketing personnel's working on the field. The marketing evaluation process is done by manually. To analyse and track these persons is very difficult weather they are working efficiently or not. Data analysis is a process that begins with retrieving data from various sources and then analysing it with the goal of discovering beneficial information. Basically analysis refers to breaking a whole into it separate component for individual examination.

Consider the following three main benefits of measuring improvement in marketing:

1. Identifying what's working.
2. Identifying what's not working.
3. Identifying ways to improve.

## 2. Motivation, Aim, Objective

From last few years online marketing increases rapidly, so there is a need to organize and manage all data online and to save that data in single place from which we can easily retrieve that data. Existing system cannot track the person working on field and cannot provide automated report.

### A. Aim

“To develop an effective software solution for marketing system by analyzing and tracking their activities on daily basis and generate report accordingly”.

### B. Objective

- To analyze the data of field work.
- To track the current position of the person during field work.
- To generate the efficiency report based on the obtained data.
- To develop automated system which reduce manual work.

## 3. Background History

Previous marketing system works manually. They maintained their weekly or monthly work report on paper. Now a day also many marketing systems use excel for submitting their work report. In previous system, there is unavailability of tracking the person who's working on field. There is no guarantee of the person working on field are they really doing their job or not, because they submit their work report on weekly or monthly basis. Manager can't track the current position of the person on field and also can't obtain field data on daily basis and generate their report automatically. In previous system all work is done manually. MR submit reports weekly or monthly basis so it's hard to track the current position of the person working on field. In existing system, we can't track MR and we can't see daily selling report on daily basis. Fast report generation is not possible that's why tracking is so difficult. Information about Doctors, Stock of Medicines is not properly maintained. No central database is available for storing that information.

As the online Marketing increases day by day there is a need

to make marketing system automated and track the person who is working on field. There has been a lot of related work which focuses on the online report generation. However, none of these studies takes all the analysis of marketing data, nor do they tracking of the person who is working on field.

#### 4. Proposed System Design and Analysis

Proposed system is a Marketing data analysis and tracking system. This system is specifically developed for pharma industry. In this system there are three main functionalities i.e. Admin, Manager, MR. Admin can add Managers; MR. Admin can also search managers and MR and their work, update information, and edit information.

Proposed system includes the following aspect:

1. Automated report generation.
2. Fast access to the data.
3. More storage capacity.
4. Provides easy search facility

All the manual difficulties in managing the existing system have been rectified by implementing computerization.

##### A. Analysis

This system is made for analyzing and tracking the marketing data. This system contains three functionalities:

**Marketing Representative (MR):** MR will generate their daily work report and submit it to manager; MR can also manage all appointments with doctors and generate their reports.

**Manager:** Manager can handle all work of MR; manager can see current location of the person working on the field, manager give approval to MR for various activities.

**GPS Tracking:** This function is use for tracking the current position of the person working on field as well as track the manager.

**Admin:** In admin section, admin can add, delete and track the current position of MR and manager. Admin can also see the work report of manager and MR.

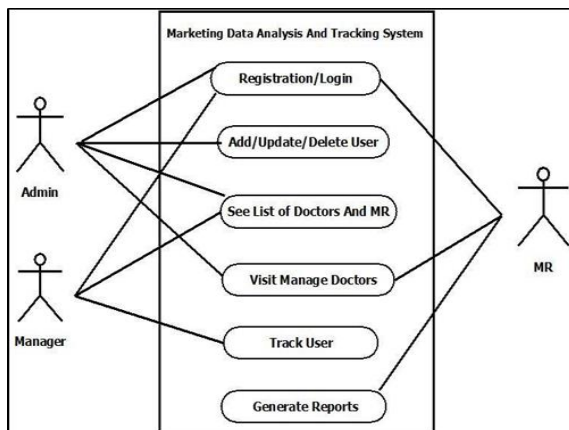


Fig. 1. Use Case Diagram

##### B. Requirement Analysis

Requirement analysis is a software engineering task that begins the gap between the system level engineering and software design. The job of requirement analysis is to understand specific requirement that must be achieve to build high quality of software. Requirement analysis is divided into two types:

**Data analysis:** It includes the detail of MR's, chemist detail. It also contains the list of doctors, stock related information and other activities of doctors.

##### C. Function analysis

It contains the function of three modules that are as follows:

- **Admin:** Admin can add new user, update or delete user and viewed the report of MR and manager. Admin can also track the position of marketing person who is working on field.
- **Manager:** Manager can assign the list of doctors to the MR and also track the current position of person working on field.
- **MR:** MR can visit the doctors and generate their work report on daily basis.

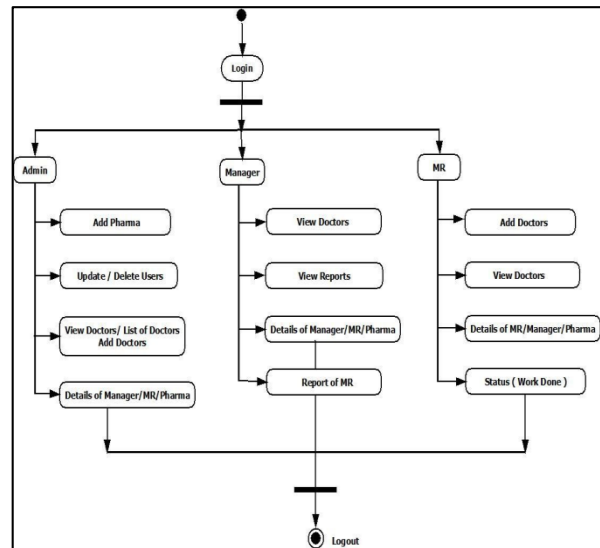


Fig. 2. Activity diagram

##### D. System design

The Marketing Data Analysis and tracking system is use to analyze the marketing data and tracking the current position of the marketing people working on field.

This project includes three main models:

- Admin
- Manager
- MR

In Admin Section Admin can ADD, DELETE, UPDATE Doctors as there need. Admin is able to see all the details of Doctors, Manager and MR. Manager is the person that he gets the report which are submitted by the MR with their current location by this generated report the manager can analysis it and

takes decision on their work also Manager search there report by the area wise by the location. MR is the most important person in this system in which MR can add Doctors and Pharma.MR first select the doctors that he visited .MR generate there reports on dally basis, monthly or weekly manner. This generated report is send to the manager. GPS plays an important role in this system in which it helps to track the MR on working on the field.

Marketing Data Analysis and Tracking System works very well under restrictive and less than perfect conditions. This project will have implemented by using IoT (Internet of Things) i.e. mobile or laptop to generate daily work report and uses GPS tracking to track the current position of field working people. This system also implements as an android app for any marketing system through which any marketing person can access their data and see their daily work.

### 5. Conclusion

This system analysing the data related to the working of marketing people and track the current position of the person who are working on field, as it is difficult to manually maintain the data related to marketing field so this system analyse and

track the working of persons on field and decide the efficiency and profit. In this system, GPS technology is used to track the position and working of MR (Medical representative). The system receives the data, parses it and stored it for access over the internet. Hence, tracking and analysing is become easy, which help to increase the efficiency and Profit of the organizations.

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