

Lab - 4 DB_Project_Assignment_1-SRS

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Group No: 2

Section No: 6

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Case Study

Beach Activity Management System:

All beach activity-related records should be created in this database. The beach-related activities like scuba diving, snorkeling, paragliding, flyboarding, windsurfing, and so on. Precautionary things like helmets, swimsuits, quality shoes, gloves, etc., for particular activities, must be appropriately managed for all customers. The other things related to taking pictures and videos are also included in this database.

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1. Introduction

1.1. Purpose

Management Systems are systematic frameworks designed to manage an organization's procedures and data to improve data and processes. Management Systems can help to improve operations, manage risk, manage data, etc. Here we need to make a management system for some beaches where we need to manage beach activities.

There are multiple beach activities which include equipment, trainers, cost guards, customers, and other staff members working on the beach activities. There are different types of demands from customers and service providers which need to be managed. Databases of the equipment need to be addressed and checked that everything is working correctly as there are chances of accidents. A proper safety operation must be handled.

The primary purpose of making the database is to improve customers' experience and the beach activities and business of these activities. This would help maintain customers' safety and make their activities more adventurous and fun. It will hold all the records of customers, staff members, and the activities provided. It will help in the Improvement of services. Customers will know about the participants to decide which actions to participate in. Maintenance of equipment will help in the smooth and safe operation of activities. Service providers will learn about the lowest service participation to improve that service. It will also show the customer's activities held all around the place and their service providers and charges so they can plan accordingly.

1.2. Intended Audience and Reading Suggestions

The intended audience is the group of people for which a service or product is designed. So, as we know nowadays, the beaches are the main attraction of people, especially the young generation, because today's young age wants a different experience as an adventure. Youth and adults interested in watersports are the primary audiences for beach sports.

Many people are planning trips to visit beaches to relax, and the primary audience. In the broader scope, we see everyone is interested in any one of the beach activities.

Adventure sports like Scuba Diving, Snorkeling, Paragliding, Parasailing, Flyboarding, Windsurfing, Beach Volleyball, Jet Ski, Kite surfing, Beach Sprint rowing, Banana Ride, Speed Boat, Dolphin Exploration, FootVolley, Beach Camping, Swimming with Sharks and Sailing, etc. are primarily available for many beaches.

Reading Suggestions:

1. [Beach Activities](#)
2. [Beach Notification Database User Guide](#)
3. [Beach Management](#)

1.3.Product Scope

1.3.1. The purpose

Here we are providing the service of beach activities. It has a vast scope, and many people are attracted to these activities. These services can be improved for customers, and service providers will have more chances to earn good profits and provide safety.

Activities can be measured by how many people participate in that particular activity. And how can we improve that activity for further customers or clients? We can enhance the services for clients and customers by providing them with more safety and assurance that these activities are safer so that more people will participate. We can also maintain a reasonable price to be affordable for customers and profitable for the service providers. We can also introduce exciting prizes or offers to attract more customers.

Beach activities are prevalent and adventurous activities. They will attract more customers automatically if the prices are reasonable and the activities are safer. Principal customers for these activities will be youth who are more enthusiastic about them and ready to invest in them.

Furthermore, we can improve the quality of the services by adequately maintaining the types of equipment and bringing professional trainers and helpers who will help customers be more comfortable with the equipment and the technique and teach them how to do that activity. They will also help them prepare the errors, do's, and don't they should follow during the training. This will help customers have a safer and more enjoyable experience,

and they will also recommend this to other people who might be interested in participating in these activities.

1.3.2.Benefits and Goals

There are several benefits of this service which we are providing, which are as follows.

1. It will provide the administration with records of customers, trainers, and equipment and their conditions.
2. It will give administration reminders to maintain their equipment which is not in good condition.
3. It will help the administration improve the activity with minimum participation.
4. It will help customers select the activities suitable for them and see in which activity there is maximum participation.
5. This will also help customers to know where they can go and which service provider they need to go to for their demands.

1.4. Description

This software would provide the management of beach activities. A brief description of the functionalities of this software is as follows:

1. Create and Edit Activities:

It will allow administrators to create new activities and edit the old activities. It also provides information to the administration as to whether inactivity needs improvement or not. It will help administrators to implement the recent changes in activities that are done. It will also help them create new activities introduced in their system to bring more participation in those activities.

2. Management of Events on the beach:

This will manage any other events booked to be held on the beach. This software will help manage the event's date and time so that no two events collide on the same day. This will also contain the details of the booked customer and make sure that all the arrangements are made according to the customer's demand.

3. Keep track of equipment and services:

This software keeps track of all equipment used in activities and the services of workers and equipment. This software will inform the administrator if any assistance is unavailable and is essential for training or customers. It will also maintain all the salary records of trainers and workers. It will also help the administrator to maintain the quality of the equipment.

4. Maintenance of the Equipment:

If any equipment is missing or damaged, it will inform the administration, and if the need for any equipment is unavailable, it also tells. If the number of customers increases or decreases, it also gives information about extra or less equipment for that activity.

5. Customers Friendly Software:

This software will be very friendly to customers because this software will track the records of all activities and this record will help the customers to know about that activity. This software helps in decision-making for customers. Customers will also be able to learn how to do this activity. They can also take the knowledge about that activity to do that activity. This software will also help them to select the most suitable action according to their choices. This will also let them know about the safety measures taken by the service providers, which will help them to select the safer activity.

6. Helps increase activity safety measures:

It enables the administrator to maintain the activity's safety by checking the equipment used for that particular activity. It will keep a record of the condition of equipment so that proper and time-to-time servicing is done on the equipment. It will also ensure appropriate safety measures are taken during the activity.

7. Keep track of profits and feedback on the activities:

This software will keep track of the expenses in providing the activity service to administrators so that they can charge the customer accordingly to make a profit in their business. It will also help them get feedback from the customers so that they can know which activity needs to be improved. They will also know which activity has maximum participation so that they can maintain that activity.

8. Regularly updating of Database:

There are instances where a planned activity needs to be postponed or canceled altogether due to rain or technical difficulty. In such cases, the administrator must inform all the customers about this and reschedule or cancel their scheduled activity. The system allows us to edit a workout and access the customer's information for that particular activity.

9. Taking care of the images and videos of Customers:

Many customers want their pictures and videos while they enjoy the activity to keep their memory safe. This system will manage their photos and videos accordingly. It will also help administrators to manage the images and videos of their customers, which they can provide to customers.

2. Background Readings

2.1 Reading Summary:

1. Beach Management Activities:

This reading shows how the zones are created on the beach to manage the crowd. This division is based on the activities which are more popular and can have significant participation. So zones are classified into low, medium, and high-intensity recreation zones. Another way to categorize activities is the risk involved: Low, medium, and high conflicting activities.

2. Beach Safety:

In this article, we learn about the safety measures taken on the beach. We knew the beach safety flags and signs. We learn about the water animals that can come on the beach and their preventive measures. We also learned about the injuries that can happen on the beach.

3. Water Sports Safety Precautions:

In this article, we see how water sports or activities can be enjoyable and exciting, but if there are lapses in the precautions or safety measures, an injury might happen. This reading shows how to initially warm up your body so the chances of injury decrease. It also tells tips for water sporting activities. It describes the primary injuries that can

occur, like sprains, strains in the neck or head area, concussions, lacerations, and Waterborne disease.

4. Beach Activities:

This document taught us how different commercial activities could be arranged on the beach. This document tells us how we can arrange promotional activities, filmings, marriage ceremonies, food services, surf schools, competitions to promote that activity, etc. All this activity brings the monitoring of the beach so that security is maintained so proper arrangements should be made accordingly. This also tells us how we have to make a system so we can arrange all the activities properly without any conflict of timings. It also has an idea about off-leash dog beaches, which would attract many people.

5. Water Sports Safety Guide:

This article shows the safety measures to be taken during water sports, rides on boats, and inland waterways. In this, we learned that there are several different water sports activities, and each activity will raise a new set of safety issues. For instance, safety requirements and concerns change depending on whether a person is water skiing on a lake or participating in offshore boat racing. The setting where the sport is being performed will determine what safety precautions must be taken.

6. Beach Activities and Games for Endless Fun:

In this article, we learned about the different types of beach-related activities which we can include in our database system. It also shows the most popular activities among the people. It also details the activities and how people can enjoy themselves on the beach.

7. Database System Concepts, by Abraham Silberschatz, Henry F. Korth, S. Sudarshan.

From this book, we understood the DBMS concepts like E-R Model, Database designing, etc.

2.2 Readings:

- Beach-Management-Activities:
<https://www.joondalup.wa.gov.au/wp-content/uploads/2018/07/2018-02-Beach-Management-Activities-Policy-1.Pdf>
- Beach Safety:
<https://www.healthdirect.gov.au/beach-safety#:~:text=To%20make%20sure%20you%20are,Or%20after%20a%20big%20meal.>
- Water Sports Safety Precautions:
<https://www.patientfirst.com/blog/water-sports-safety-precautions>
- Beach Activities
<https://www.slideshare.net/sallybayliss/tracks-43592654v1summary-documentcommercialactivityonbeachesfinal17march2014>
- Water Sports Safety Guide
<https://www.realbuzz.com/articles-interests/sports-activities/article/water-sports-safety-guide/>
- Beach Activities And Games For Endless Fun
<https://playtivities.com/30-beach-activities-and-games-for-endless-fun/>
- Database System Concepts, by Abraham Silberschatz, Henry F. Korth, S. Sudarshan.

2.3 List the combined Requirements gathered from Background Reading/s:

1. A well-functioning Database management system is required to maintain and update all the data related to activities, customers, and staff.
2. A user interface is also required so that customers can access all the information they need.

3. All the essential equipment and trainers associated with that activity data should be maintained.
4. Records of servicing of data should be maintained.
5. Administrators and trainers/staff will be assigned different roles to secure the customer's sensitive information.
6. The system should be designed in a way that it has fast performance.
7. All the precautionary measures should be taken during the activity to ensure customers' safety.
8. It should show administrators how to improve the commercial activities on the beach and maintain accurate data of all the activities.
9. Help administrators place all the safety boards and sign in proper places where they can reach the maximum audience.

3. Interviews

1. Interview 1:

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Nishtha Jain(**Role Play**)

Designation: Manager

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer

Designation: Software Designer

Date: 24/9/2022

Time: 14:30

Duration: 30 minutes

Place: Zoom

Purpose of Interview:

Preliminary meeting to identify how activities are organized and the problems in beach activity management.

Agenda:

1. Identify and discuss the beach activity management.
2. Identify and Discuss the problems that arise while managing activities.

Documents to be brought to the interview:

1. Identification Card
2. List of problems they have encountered

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Nishtha Jain(**Role Play**)

Designation: Manager

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer

Designation: Software Designer

Date: 24/9/2022

Time: 14:30

Duration: 30 minutes

Place: Zoom

Purpose of Interview:

Preliminary meeting to identify how activities are organized and the problems in beach activity management.

Agenda:

1. Identify and discuss the beach activity management.
2. Identify and Discuss the problems that arise while managing activities.

Documents to be brought to the interview:

1. Identification Card
2. List of problems they have encountered

Summary:

1. From this interview, we learned how beach activities are organized and managed.
2. Several things need to be managed, like staff, trainers, equipment, etc., for the proper functioning of the activities.
3. The main task is to first manage the crowd on the beach. So that there are no problems related to crowd management.
4. Sometimes, some equipment is missing or damaged.
5. Waste management is also an essential issue on Indian beaches, as many people throw their garbage anywhere on the beach.

6. Sometimes, administrators or customers neglect the weather conditions in their excitement for that activity. This can lead to some accidents or mishappenings.
7. Medical facilities must be there; some administrators are careless about safety measures.
8. Strict rules should be implemented so that customers do not get into activities unsuitable for their age, height, or weight.

2. Interview 2:

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Ronit Jain(**Role Play**)

Designation: Administrator

Interviewer: 1) Nipun Shah

Designation: Software Engineer

Date: 28/9/2022

Time: 16:00

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Preliminary meeting to identify the activities and equipment used in those activities.

Agenda:

1. List of Activities performed
2. Identify, and discuss the equipment used in the Activities

Documents to be brought to the interview:

1. Identification Card
2. List of activities
3. List of equipment for each activity

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Ronit Jain (**Role Play**)

Designation: Administrator

Interviewer: 1) Nipun Shah

Designation: Software Engineer

Date: 28/9/2022

Time: 16:00

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Preliminary meeting to identify the activities and equipment used in those activities.

Agenda:

1. List of Activities performed
2. Identify, and discuss the equipment used in the Activities

Documents to be brought to the interview:

1. Identification Card
2. List of activities
3. List of equipment for each activity

Summary:

1. In this interview, we learned about the activities organized on the beaches and the equipment required.
2. The information about famous water sports and water activities.
3. After the interview, we learned that the attractive visibility of activity plays an essential role in publicity.
4. We can increase the number of customers of the activity through efficient implementation and well-structured equipment
5. Some activities like scuba diving need oxygen cylinders, Buoyancy Control Devices (BCD) from Aqualung, fins, etc.
6. The most used equipment is the life jacket used in almost all activities.

7. We learned that the same equipment is used for some activities, and for some activities, different types of equipment are used to provide service.
8. We also learned how the different activities are managed and how all the equipment is managed.

3. Interview 3:

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Nipun Shah (**Role Play**)

Designation: Trainer

Interviewer: 1) Ronit Jain

Designation: Designer

Date: 28/9/2022

Time: 20:00

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Preliminary meeting to understand the problems faced by the trainers during the activity.

Agenda:

1. Identify and discuss the problems faced by the trainers.

Documents to be brought to the interview:

1. Identification Card
2. Trainer Certification
3. List of problems they face

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Nipun Shah (**Role Play**) **Designation:** Trainer

Interviewer: 1) Ronit Jain **Designation:** Designer

Date: 28/9/2022 **Time:** 20:00

Duration: 30 minutes **Place:** Cafeteria

Purpose of Interview:

Preliminary meeting to understand the problems faced by the trainers during the activity.

Agenda:

1. Identify and discuss the problems faced by the trainers.

Documents to be brought to the interview:

1. Identification Card
2. Trainer Certification
3. List of problems they face

Summary:

1. In this interview, we learned about the problems faced by the trainers.
2. They have issues regarding the equipment if they are not adequately maintained; they still have to adjust to ensure that their and the customer's lives don't get risked.
3. They have to adjust according to the customer's coordination level.
4. They must always be on alert during the activity and handle the customer properly.
5. They also face problems with the administration on the quality of the equipment that is inappropriate to use. Still, they are forced to use these because of pressure from the administrator.

4. Interview 4:

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Rohit Rao (**Role Play**)

Designation: Safety Operations
Incharge

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer
Designation: Software Designer

Date: 29/9/2022

Time: noon

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Preliminary meeting to understand the safety operations that are taken care off while managing the activities and during the activities.

Agenda:

1. Identify and discuss safety operations.
2. Problems that arise during safety operations.

Documents to be brought to the interview:

1. Identification Card
2. Certificate to act as Safety Operations Incharge
3. List of measures they take to manage safety operations
4. List of problems they face in managing the safety and security of people visiting beaches.

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Rohit Rao (**Role Play**)

Designation: Safety Operations Incharge

Interviewer: 1) Ronit Jain

Designation: Designer

2) Nipun Shah

Designation: Software Designer

Date: 29/9/2022

Time: noon

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Preliminary meeting to understand the safety operations that are taken care off while managing the activities and during the activities.

Agenda:

1. Identify and discuss safety operations.
2. Problems that arise during safety operations.

Documents to be brought to the interview:

1. Identification Card
2. Certificate to act as Safety Operations Incharge
3. List of measures they take to manage safety operations
4. List of problems they face in managing the safety and security of people visiting beaches.

Summary:

1. After the interview, we learned what safety operations are that are done or need to be done in some conditions.
2. We also got to know the problem which arises during safety operations.
3. Information about the equipment which is specially used in safety operations.
4. After the interview, we learned what lifeguards and lifesavers are and about the notation and flag placed on beaches. E.g., **no flag=no swim**, etc.

5. First aid kit is mandatory.
6. The essential people in safety operations are lifeguards, who must always be alert on the beach and take proper action if there is any mishap.

5. Interview 5:

Beach Activity Management System: **Mock** Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Rohan Reddy (**Role Play**)

Designation: Deputy Administrator

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer

Designation: Software Designer

Date: 29/9/2022

Time: 13:00

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Meeting to understand the problems arise during the listing of activities and management of equipment.

Agenda:

1. Identify and discuss the problems in managing the activities and listing them in front of customers.
2. Identify and discuss the problems in managing the equipment related to each activity.

Documents to be brought to the interview:

1. Identification Card.
2. List of problems they face in managing the Activities.
3. List of problems they face in managing the Equipment.

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Rohan Reddy (**Role Play**)

Designation: Deputy Administrator

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer

Designation: Software Designer

Date: 29/9/2022

Time: 13:00

Duration: 30 minutes

Place: Cafeteria

Purpose of Interview:

Meeting to understand the problems arise during the listing of activities and management of equipment.

Agenda:

1. Identify and discuss the problems in managing the activities and listing them in front of customers.
2. Identify and discuss the problems in managing the equipment related to each activity.

Documents to be brought to the interview:

1. Identification Card.
2. List of problems they face in managing the Activities.
3. List of problems they face in managing the Equipment.

Summary:

1. In this interview, we learned about the problems faced in managing the activities and equipment.
2. All the list of activities and trainers associated with them and the equipment associated with them are to be maintained.
3. Attendance of all the staff members and trainers is to be maintained, and their work is to be divided so that there is no problem and everything is worked out.

4. Equipment needs to be appropriately maintained, and servicing should be done from time to time so that they are in good condition.
5. Regular equipment maintenance will help increase the activity's safety, attracting more customers.
6. Cost of maintenance and equipment needs to be managed accordingly, so there is no loss and a good profit.

6. Interview 6:

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Sanyam Jain (**Role Play**)

Designation: Event Manager

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer

Designation: Software Designer

Date: 30/9/2022

Time: 10:00

Duration: 30 minutes

Place: Zoom

Purpose of Interview:

Preliminary meeting to understand about the event management and the production work that is done for an event.

Agenda:

1. Talk on event management
2. Production
3. Guest management

Documents to be brought to the interview:

1. Identification Card
2. List of events
3. List of equipment they require in production
4. Problems they face during an event

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Sanyam Jain (**Role Play**)

Designation: Event Manager

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer
Designation: Software Designer

Date: 30/9/2022

Time: 10:00

Duration: 30 minutes

Place: Zoom

Purpose of Interview:

Preliminary meeting to understand about the event management and the production work that is done for an event.

Agenda:

1. Talk on event management
2. Production
3. Guest management

Documents to be brought to the interview:

1. Identification Card
2. List of events
3. List of equipment they require in production
4. Problems they face during an event

Summary:

1. In this interview, we learned how the events are managed on the beaches.
2. Events on beaches are pre-booked, and all the work is done according to the event.
3. Production work includes decoration, setting up of the stage (if required), chair setup, etc.

4. Event management has the very challenging task of managing every small requirement demanded by the customer.
5. There are many things that come on the spot and need to be arranged at that point of time only.
6. This work requires a more proper arrangement so that the minimum number of works comes up at the last point.

7. Interview 7:

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Dev Patel (**Role Play**)

Designation: Customer

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer
Designation: Software Designer

Date: 30/9/2022

Time: noon

Duration: 30 minutes

Place: Room

Purpose of Interview:

Preliminary meeting to understand about the requirements and problems faced by the customers.

Agenda:

1. Requirements of customers
2. Customer's thoughts about the activities
3. Problems faced by the customer's

Documents to be brought to the interview:

1. Identification Card
2. List of requirements
3. List of problems

Beach Activity Management System: Mock Interview Summary

System: Beach Activity Management System

Project Reference: SF/SJ/2022/12

Interviewee: 1) Dev Patel (**Role Play**)

Designation: Customer

Interviewer: 1) Ronit Jain
2) Nipun Shah

Designation: Designer

Designation: Software Designer

Date: 30/9/2022

Time: noon

Duration: 30 minutes

Place: Room

Purpose of Interview:

Preliminary meeting to understand about the requirements and problems faced by the customers.

Agenda:

1. Requirements of customers
2. Customer's thoughts about the activities
3. Problems faced by the customer's

Documents to be brought to the interview:

1. Identification Card
2. List of requirements
3. List of problems

Summary:

1. This interview taught us about customers' perspectives and what they want from the service-providing companies.
2. We learned that customers want a platform to compare and select all their activities.
3. They also want that system to suggest an activity according to their need and experience.

4. They also feel that safety should be improved and risk should be minimal during an activity.

3.1 List the combined Requirements gathered from Interviews:

1. From the interviews we conducted, we learned about many aspects of the beach activities and their management.
2. We noted that safety is the most important thing which should be maintained properly and needs a lot of improvement.
3. All the equipment should be replaced with new ones and be maintained by properly servicing the equipment regularly.
4. We also see how many issues need to be addressed.
5. A system is needed to show and maintain all the data available to the administrators.
6. The system should show that no two events are booked on the same day or at the same time.
7. Systems also need to manage the data related to staff and trainers so that all the duties are fulfilled.
8. System should also manage the safety operation properly and maintain data for the first aid kits, ambulance, coast guards, lifeguards, etc.
9. It should also maintain the list of available equipment in the inventory and their condition. It should create a new list of equipment which are needed to buy.
10. It should also maintain the expenses and profit because, after all the expenses, it should be a customer-friendly profitable system.
11. It should also maintain a system where customers can see all the data related to their requirements and get suggestions for the best activity according to their requirements.

4. Questionnaire/s

1. Your Age *(Select an appropriate option)*

- ☐ 11 - 18
- ☐ 18 - 25
- ☐ 25 - 35
- ☐ 35+

2. How frequently do you visit Beach? *(Select an appropriate option)*

- ☐ Weekly (1 or 2 times a Week)
- ☐ Monthly (1 or 2 times a Month)
- ☐ Yearly (1 or 2 times a year)
- ☐ Rarely

3. How much are you interested in doing water sports on Beach? *(Circle a suitable option)*

1 / 2 / 3 / 4 / 5

4. Which are the activities you are most interested in? *(Choose appropriate options)*

- ☐ Scuba Diving
- ☐ Snorkeling
- ☐ Paragliding
- ☐ Parasailing
- ☐ Flyboarding
- ☐ Windsurfing
- ☐ Beach Volleyball
- ☐ Jet Ski
- ☐ Kite surfing
- ☐ Beach Sprint Rowing
- ☐ Banana Ride
- ☐ Speed Boat
- ☐ Dolphin Exploration

- ☐ Foot Volley
- ☐ Beach Camping
- ☐ Swimming with Sharks

Other:

5. Are you interested in getting professional training and doing an activity on your own?

- ☐ Yes
- ☐ No
- ☐ Maybe

6. Do you want a Trainer?

- ☐ Yes
- ☐ No
- ☐ Maybe

7. How satisfied are you with the safety measures followed till now during the activities?

1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10

8. How much are you worried about your safety during the activity?

1 / 2 / 3 / 4 / 5

9. How much are you satisfied with the equipment used during the water activity?

1 / 2 / 3 / 4 / 5

10. Do you want locker facilities to keep your belongings?

- ☐ Yes
- ☐ No
- ☐ Maybe

11. Your views on the safety precautions taken and equipment used during the water activities.

.....

.....

.....

12. Are you interested in purchasing your photos and videos captured during the activity?

- ☐ Yes
- ☐ No
- ☐ Maybe

13. Are you interested in organizing any of your events on the beach?

- ☐ Yes
- ☐ No
- ☐ Maybe

14. Any Suggestions for improvement?

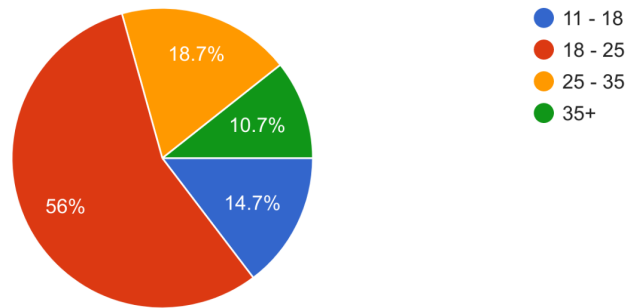
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Google Form Link: <https://forms.gle/UnsMBmwhaSTWVgPw9>

4.1 Summary:

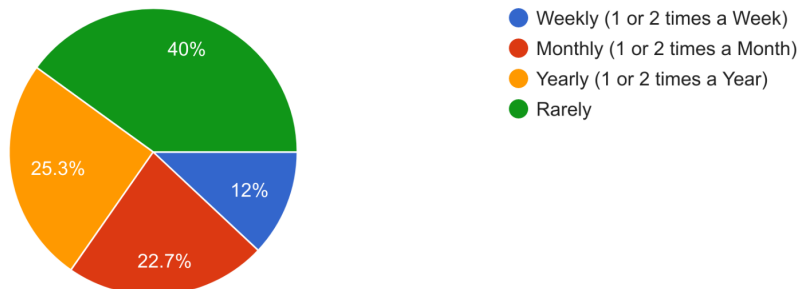
Q1: Your Age
75 responses



Intention: Through this question, we wanted to know the age range of people more likely to participate in beach activities.

Result: We can see that maximum participation is from ages 18 - 25. This means that youth are more interested in beach activities, and full participation will be from their side.

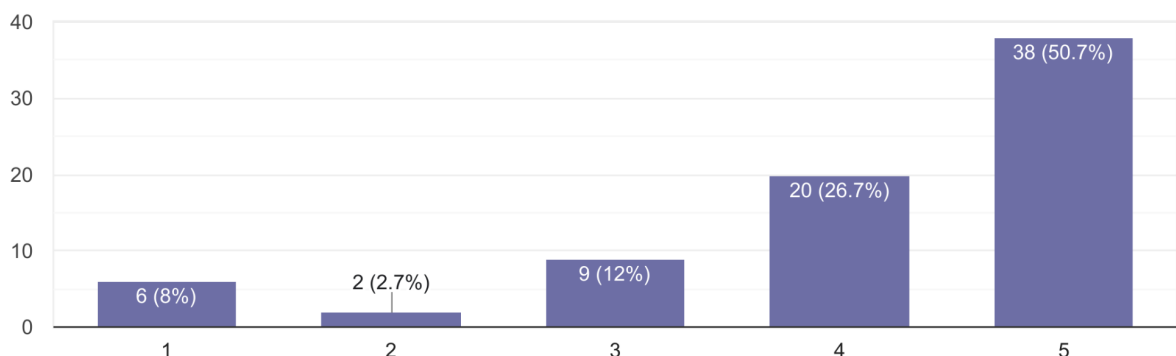
Q2: How frequently do you visit Beach?
75 responses



Intention: From this question, we will see how frequently people visit beaches.

Result: From the responses, we can see that the maximum number of people rarely or in a year once or twice visit the beach.

Q3: How much are you interested in doing water sports on Beach?
75 responses



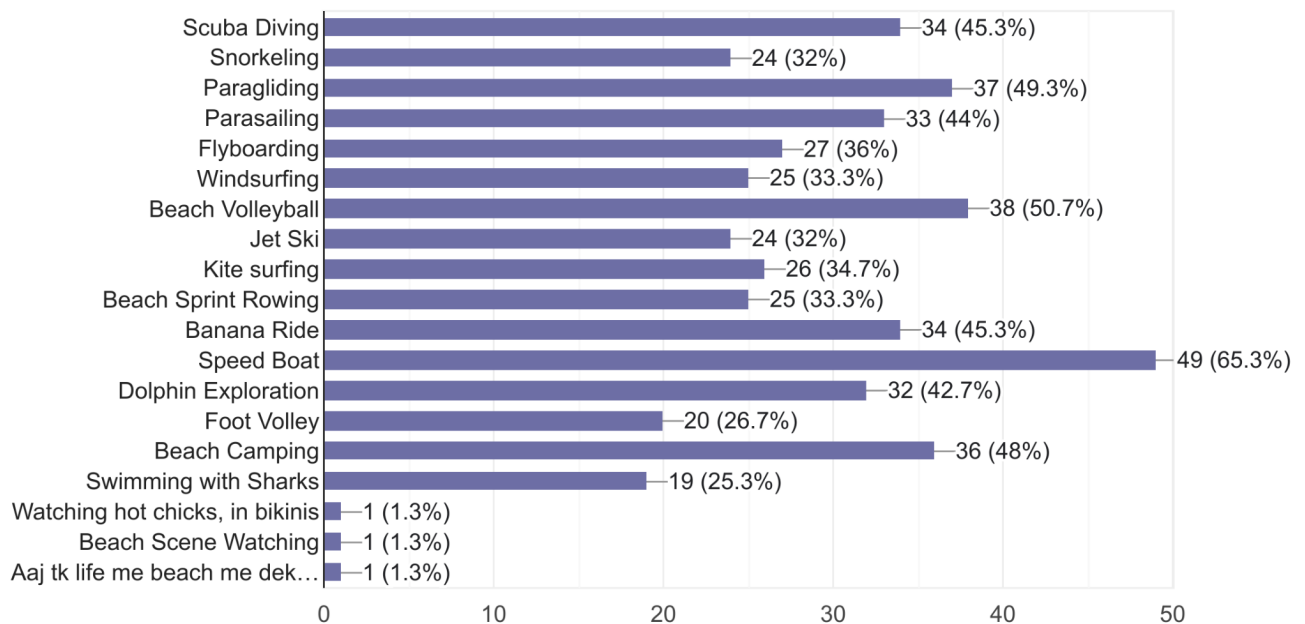
Intention: We will see how many people are interested in watersports from this question.

Result: Most people are interested in water sports, and approximately 50 % are very interested in water sports.

Q4:

Which are the activities you are most interested in?

75 responses



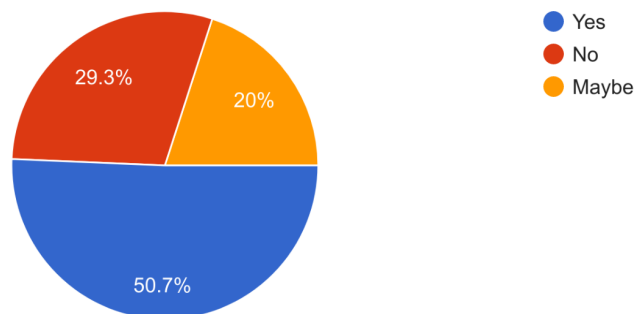
Intention: We see which beach activity maximum people are interested in from this question.

Result: Most people are interested in speed boats, beach camping, and scuba diving.

Q5:

Are you interested in getting professional training and doing an activity on your own?

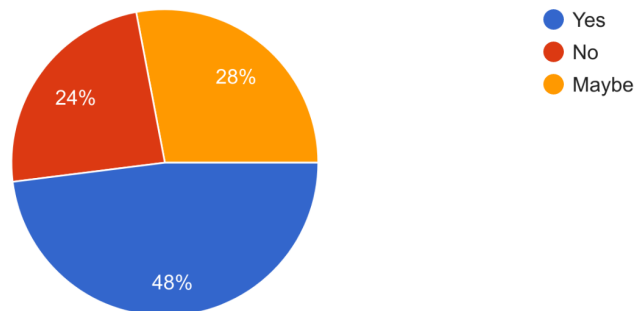
75 responses



Intention: From this question, we will see how many people know about doing that activity so that we can arrange the trainer for them for that particular activity.

Result: Approximately 50% need a trainer, and approximately 36% of people can do activities independently.

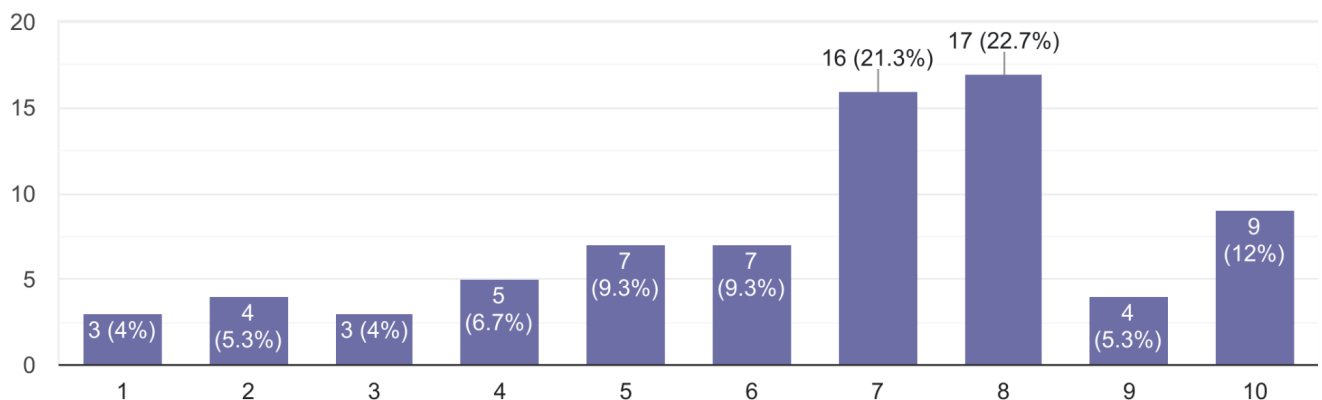
Q6: Do you want a Trainer?
75 responses



Intention: How many people or customers do we need a trainer?

Result: As we collect the data from the above question, we can see that approximately 47% need a trainer and 30% don't.

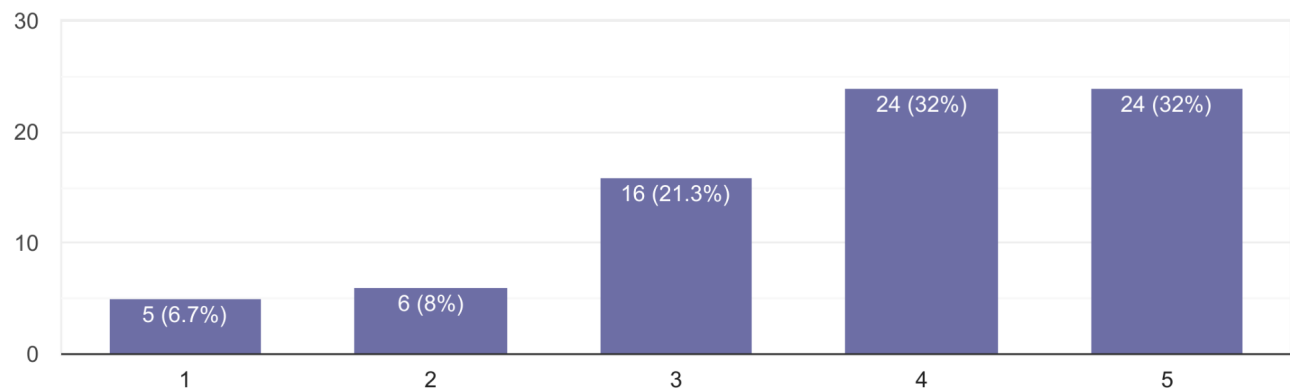
Q7: How satisfied are you with the safety measures followed till now during the activities?
75 responses



Intention: From this question, we saw how many people are satisfied with the safety measures taken during the activities.

Result: We can see a mixed response in satisfaction with the safety measures. Maximum people have rated 7 out of 10, but some have also given less than 5.

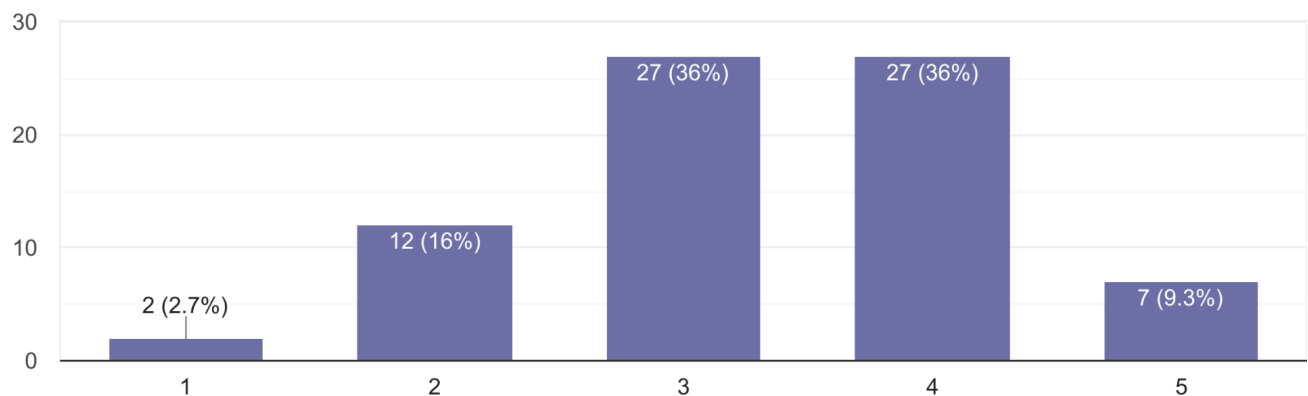
Q8: How much are you worried about your safety during the activity?
75 responses



Intention: From this question, we are trying to determine how much people worry about their safety during the activity.

Result: We can see from the results that around 61% of people have given ratings of 4 or 5 out of 5, which tells us that many people are worried about their safety during the rides.

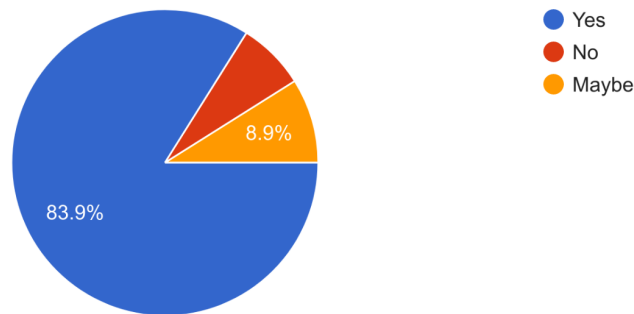
Q9: How much are you satisfied with the equipment used during the water activity?
75 responses



Intention: From this question, we are trying to determine how much people are satisfied with the equipment used during the water activity.

Result: We can see from the results that around 70% of the people have voted 3 and 4 points out of 5. So people are not completely satisfied with the equipment used in the activities. This shows that there are still chances of improvement in the quality of the equipment.

Q10: Do you want locker facilities to keep your belongings?
56 responses



Intention: From this question, we see whether administrators need to arrange the locker for the people.

Result: From the results, we can see that 82.4% of people are interested in keeping a locker for their personal belongings.

Q11: Your views on the safety precautions taken and equipment used during the water activities.
7 responses

Very bad , condoms must be of higher qualities

Great work

Regular inspection of equipments dont take placd

Ok



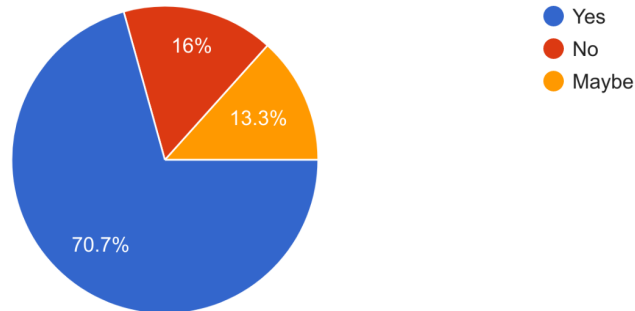
They should maintain the safety measures and regularly check the equipments

Need to be more aware and careful for equipment

Intention: From this question, we intended to get people's views on the safety precautions and equipment used during water activities.

Result: We see people want administrators to be more careful and aware of the equipment used. People wish for a regular inspection of the equipment.

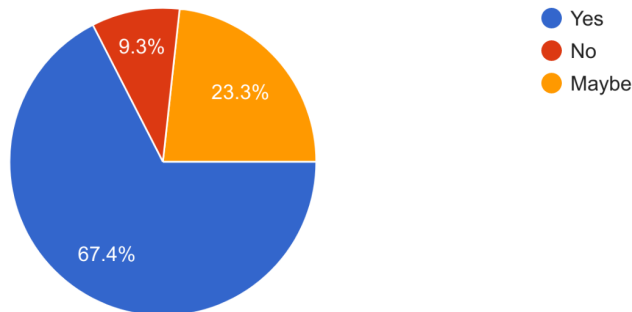
Q12: Are you interested in purchasing your photos and videos captured during the activity?
75 responses



Intention: We see how many people are interested in getting their photos and videos from this question.

Result: From the above responses, we can see that approx 70% of people are interested in their pictures and videos.

Q13: Are you interested in organizing any of your events on beach?
43 responses



Intention: Some major events need more space so we can arrange the customers of other activities and the event management.

Result: We see that 65% of people are interested in organizing their events or special beach days.

Q14:

Any Suggestions for improvement?

8 responses

No

Nude beaches would be a great idea , that way we can do a little cardio

Women Safety& worried about Water safety

Appropriate settings for relaxing should be made at the time of sunset & sunrise.

Intention: From this question, we wanted to know any other suggestions for improvement in the services.

Result: We can see concerns about women's safety, so that should be taken care of. We can also see people want facilities for relaxing during the sunset & sunrise.

4.1 List the combined Requirements gathered from Questionnaire:

1. From this questionnaire, we learned about customers' views on a particular set of questions.
2. We see that people aged 18 - 25 years are more interested in participating in the activities on the beach.
3. We can see that most people are interested in participating in water activities.
4. We see that people are worried about their safety during the activities, so that needs to be improved.
5. Many people are interested in having lockers for keeping their belongings safe on the beach. So there should be a management system that all the belongings are safe in the lockers.
6. Many people are also interested in arranging events on beaches, so there should be a system that helps manage those events.

5. Observation/s

Beach Activity Management System: Mock Interview Plan

System: Beach Activity Management System

Project Reference: SF/SJ/2022/Obv1

Observations by: Ronit Jain

Date: 30/9/2022

Time: 15:30

Duration: 45 minutes

Place: Beach Activity Center

Observations:

1. No proper system was there to maintain the data of customers, hand made slips were distributed.
2. Information about the customers needed to be stored better.
3. Equipment was correctly stored so that no damage was there.
4. Trainers were well trained to perform all the activities available there. They were beneficial to customers.
5. Safety equipment was maintained well.
6. Many sorts of activities were available there.
7. Payment of all sorts was accepted for the convenience of customers.
8. All the security measures were implemented correctly.
9. Height and age restrictions in some activities were managed by asking customers their ages.
10. Customers were managed very smoothly.
11. Events on the beach were correctly organized, but improvements could have occurred.
12. Beach cleanliness was not appropriate. It should be appropriately managed. People should be careful about their garbage.

5.1 List the combined Requirements gathered from Observations:

1. We see that digitalized systems should be used rather than handwritten slips.
2. Data should be managed from the equipment used during the activity so that all the equipment is maintained correctly and serviced regularly.

3. All the safety measures should be followed correctly, and there should be no lapses in the safety measures.
4. Safety drills should be conducted regularly so that staff members are adequately prepared for any situation.
5. Customer-friendly service should be provided to be happy with the service and revisit them.
6. Proper cleanliness should be maintained by managing proper dustbins on the beach, and there should be fines on those who through garbage here and there.

6. Fact Finding Table

Objective	Technique	Subjects	Time Commitment
To get the background on beach activity management and the database management system.	Background Reading	Few similar projects related to beach activities and the activities.	2-day
Preliminary meeting to identify how the activities are organized and the problems faced by the organizers.	Interview	Manager	30 Minutes
Preliminary meeting to identify a list of activities and list of equipment required.	Interview	Administrator	30 Minutes
Meeting to understand the problems faced by the trainer.	Interview	Trainer	30 Minutes
Meeting to understand the safety operations on the beach and the issues in the system.	Interview	Safety Operations Incharge	30 Minutes
Meetings to understand problems while managing activities and equipment.	Interview	Deputy Administrator	30 Minutes
Meeting to know how various events are managed on the beaches.	Interview	Event Manager	30 Minutes
Meeting to know customers' views on the system and administration providing these services.	Interview	Customer	30 Minutes
To get to know people's thoughts on the various parts of beach activity management	Questionnaire	Student	2 Day
To understand the beach activities management by observing.	Observation	Visit at beach	45 Minutes

7. List of Requirements

1. Data management of Customers:

Frequency: 3

Information of customers needs to be appropriately stored and managed regularly. Customers must get their updates about the activity they have booked regularly so that customers can manage their time accordingly. This will help them efficiently work on their time management. Information about customers for promotional messages should also be saved for later use.

2. Management of Activities:

Frequency: 2

Initially, activities should be selected, and their services should be decided. All the people related to that activity should be assigned their jobs for managing the activities. Each activity should have a manager who will organize that activity and manage all the problems coming during the activity.

3. Management of Equipment:

Frequency: 2

Equipment management is a must. Sufficient equipment should be available to manage all the activities and customers. The quality of each piece of equipment should be maintained by adequately storing it and providing it with proper servicing. All the equipment should be managed and stored correctly. While using the equipment, basic guidelines should be followed so that there is no severe damage to the equipment.

4. Management of Staff:

Frequency: 2

All the staff members should be provided their role while joining. They should be given their daily to-do list, which they have to do daily. They should receive their salaries on the fifth day of the month. They should also be paid for the extra time they work. Their attendance and the time they are working can be measured by using the fingerprint attendance machine, which will note their joining time day and their leaving time of day to measure their working hours.

5. Safety Operations:

Frequency: 2

This is the essential aspect of beach activity management. The safety of all the customers visiting the beach is essential. Safety Incharge Officer who will care for all the safety operations and drills on the beach should be appointed. He should also look

for no safety lapse during the activity. They should coordinate with the equipment manager that every piece of equipment used for the activity is in perfect condition. He should not allow the use of compromised equipment that might lead to risk. He should deploy all the lifeguards on the beach so they can cover the whole beach during their period.

6. Event management services:

Frequency: 2

All events organized on the beach should be appropriately managed, and no double booking should be done for a specific area. Customers' demands must be appropriately managed, and their staff members should treat their guests very well.

7. Customer Friendly User face:

Frequency: 1

There should be a platform where customers can view the services and prebook their activities. They can also know about the details of activities and all the essential information they require through that platform. This would also give them the data of participation in different activities to decide on their activity.

8. User Categories and Privileges

8.1 User Classes and Classification

1. Administrators:

They are the admin of the beach activities; they have access to all the data and rights to create/add/delete any information they want. They will have all the information about the activities, equipment, safety procedures, events, trainers, staff, customers, etc. They will also keep track of profits and losses.

2. Trainers:

They will have access to the activities allotted to them. They will also get the list of customers who are interested in getting trained and who will be participating in the activity.

3. Event Managers

They will have access to all organized events. They will also manage the bookings of events. They will also have access to the production material required. Staff members will be working on the event. Customer requirement list.

4. Equipment Manager

They will have access to all the list of equipment in the inventory. They will allocate different equipment to different activities. They will also maintain all the equipment by adequately storing and regularly checking them.

5. Booking Department

They will have all the access to book activities and the customer's database. They will manage that there is no issue in booking and no double booking is done for the same time.

6. Security Officer

Security must manage all the safety operations. He will have access to all the equipment quality and data of all the life jackets and lifeguards.

7. Customers

Customers will have access to view participation and details in all the activities to select the most suitable activity.

8.2 Privileges

- **List of user-class:**

1. Administrator
2. Trainers
3. Event Managers
4. Equipment Manager
5. Booking Department
6. Security Officer
7. Customers

- **List of privileges of user-class:**

- 1. Administrator**

- All the manager's list
- Add/delete/update feature in every database
- Money transfer details
- Customers database
- Equipment database

- Event database
- Activities Database
- Safety Operations database
- Trainers and Staff database

2. Trainers

- Customers Database
- Activities assigned to them
- Equipments List

3. Event Managers

- Customers Database
- Event Booking Database
- Equipment List for Production
- Customer Requirement List
- Staff List
- Add/Update/Create Events list
- Add/Update/Create Event booking list

4. Equipment Manager

- Equipment Database
- Inventory Storage Database
- Activity Database
- Maintenance of Equipment
- Equipment Condition Database
- Add/Update/Create equipment

5. Booking Department

- Customers Database
- Booking Database
- Add/Update/Create booking
- Payment Database

6. Security Officer

- Equipment Condition Database
- Maintenance of Equipment
- Lifeguards List
- Safety Operations List
- Conduction of Safety Drills
- List of Staff members

7. Customers

- Activity Participation Database
- Add/Delete/Update their bookings
- View details about the activities and Event organization

9. Assumptions

1. We have assumed that the internet connectivity at the server is strong enough to handle all customer queries without crashing and no data loss occurs due to technical failures.
2. All the equipment is available for each activity. They all are assigned their equip_id and activities related to them.
3. All the equipment is also in good working condition.
4. All the staff members and trainers are given their specific id and password to access their systems. Their systems are encrypted and can not be hacked.
5. Customers can only participate in the allotted time only to change the time they have to request it before the buffer time. If the slot is available, it will only be allotted to them.
6. Customers doing pre-booking need to pay their payment while booking only.
7. Each and every activity would not be available at any beach. We assume that most of all activities are present at that beach.
8. We assume that each activity will have at least one trainer and at least one equipment.

10. Business Constraints

1. All the activities are in real-time, and the booking and time allocation process should occur instantaneously and be updated in real-time for the smooth running of the beach activities.
2. Amount of all the equipment is limited.
3. Capacity of activities is limited, i.e., only a limited number of customers can participate during a round.

4. Customers can take part in any number of activities they want.
5. Trainers are limited, so a trainer might have to handle multiple activities.
6. Lifeguards are limited, so they have to cover a larger beach area.
7. Some extra trainers, staff, and lifeguards will be called during weekends and holidays.