

# **Project Report For DA-UTILITIES**

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**(TEAM - 03)**

**Binary Bugs**

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### Respected Team Members:

SR NO.	Name	Enrolment Number
1	SANGHAVI DEVINI NIKHIL	201912004
2	VARUN LAHORI	201912009
3	SURTIYANI BHAVESH DEEPAK	201912010
4	SHAH HONEYBEN VINODKUMAR	201912055
5	KAPIL TAILOR	201912075
6	AAKASH DIPAKKUMAR THAKKAR	201912082
7	SONI MIHIR RAJESHKUMAR	201912091
8	VASANI VIBHUTI JAYANTIBHAI	201912110
9	SHAH MEET JITENDRAKUMAR	201912111
10	PRAJAPATI ROHAN YOGESHKUMAR	201912113

# 1. Team formation and Introduction

## 1.1. Journey before we found system to be created

### 1.1.1. How team was formed?

There were total 12 teams formed by the sir and one of was ours consisting of total 10 members. We assume a balanced teams was made by the sir in such a way that each team is potentially equal in terms of ability of the team members.

### 1.1.2. How we searched for the project?

All members came up with the different ideas and from which we had shortlisted couple of ideas and they are as follows:

#### 1) Medical digitization:

The purpose behind the idea was to store the patient's details and past records so that whenever patient visits the hospital, doctor should have past records of the patient such as allergies, any disease, etc. Also, it will help government in getting statistics regarding health of the people of the country.

#### 2) DA-Utilities:

The main purpose behind the idea was to develop a system for the DAICT students which will provide several services such as sell/buy items, arranging sessions. This will also help special committees in arranging sessions.

### 1.1.3. Which project was selected and why?

➤ We selected DA-Utilities.

➤ Feasibility Study

Purpose :-

The main objective of the feasibility study is to determine whether the product can be implemented in timely manner, is cost effective and technically feasible.

Document :-

<https://drive.google.com/file/d/1iyeuMKQJU9rAurcIC5e9iEqELCru033d/view>

## 2. Requirement Phase

### 2.1. Entry Criteria

- Entry criteria of the requirement phase is that the team is already formed.
- The team should have introduced themselves.
- The project definition should be finalized.

### 2.2. Deliverables

#### 2.2.1. Checklist

##### Purpose :-

Checklist contains the list of tasks that has to be done within that particular phase.

##### Use :-

Checklist is used to verify that the list of defined tasks are completed or not and also is used while doing Formal Technical Review before exiting the Phase.

##### Document :-

<https://drive.google.com/file/d/1Na7SclrE3LzZSQX-KvkXEHOcBiw9KUaY/view>

#### 2.2.2. Generic

##### 2.2.2.1. Definition, Acronyms, and Abbreviation

- DA :- DAICT (Dhirubhai Ambani Institute of Information and Communication Technology)
- Special Committees :- CRs of Class and SBG Members
- HTML :- Hyper Text markup Language
- CSS :- Cascading Style Sheets
- JS :- Java Script Language

### 2.2.2.2. Technology Overview

#### ➤ Front-End Development

- ❖ HTML is used for Website Designing
- ❖ CSS is used for styling the user Interface
- ❖ Java Script is used for scripting and providing modules for dynamic implementation.
- ❖ Bootstrap is used to design responsive website for mobile view.
- ❖ JQuery is a java script library use for responsive designing.

#### ➤ Back-End Development

- ❖ Node.js (Express)

#### ➤ Server / Database

- ❖ Database :- MySQL (PHPMyAdmin)
- ❖ Server :- Apache, MySQL

### 2.2.3. System Requirement Study

#### Purpose :-

Requirement specification forms the basis of the contract between the client and the developer. It enhances the understanding of the developer and ensures that no ambiguity persist.

#### Use :-

A software requirements specification is the basis for our entire project. It lays the framework that we involved in development will follow. It's used to provide critical information to Development Team while coding to implement the required functionalities and also it is useful in performing testing of the product.

#### Document :-

[https://drive.google.com/file/d/1vxAojuSRnSOC58ZLPi2zmfz6VaD6l4A\\_/view](https://drive.google.com/file/d/1vxAojuSRnSOC58ZLPi2zmfz6VaD6l4A_/view)

<b>2.2.4. Contract</b>	
Purpose :-	
	Contract Document is the written documents that define the basis of the contract including both parties' roles, responsibilities, and detailed description of the work or service such as specifications, procedures, any other conditions, etc.
Document :-	
<a href="https://drive.google.com/file/d/1vXAgzn6AFI0ZAYSoSkTWgPVHKh0Ng7-L/view">https://drive.google.com/file/d/1vXAgzn6AFI0ZAYSoSkTWgPVHKh0Ng7-L/view</a>	
<b>2.2.5. Risk management</b>	
Purpose :-	
	Main purpose of creating Risk Management to identify potential problems before they occur, or, in the case of opportunities, to try to leverage them to cause them to occur. Risk-handling activities may be invoked throughout the life of the project.
Use :-	
	We used this document to identify potential problems that could cause trouble for our project, analyze how likely they are to occur, take action to prevent the risks we can avoid, and minimize the ones that we can't.
Document :-	
<a href="https://drive.google.com/file/d/1rPzKWKhK6ClruCDBiU4twUcCults_f-u/view">https://drive.google.com/file/d/1rPzKWKhK6ClruCDBiU4twUcCults_f-u/view</a>	
<b>2.2.6. Time Estimation</b>	
Purpose :-	
	Time Estimation is for planning and scheduling projects. They help us to assess how long a project should take, determine the resources needed, and plan the order in which we'll complete tasks.



Document :-

<https://drive.google.com/file/d/1Fuz-Mx1SiwUvonLJ5ur5-eWJZSF9AU2f/view>

## 2.2.7. Draft User Manual

Purpose :-

Preparing the draft user manual forces the development team to think from the user's perspective of how they would be using the software system.

Use :-

Draft User Manual is used to understand the flow of the system.

Document :-

<https://drive.google.com/file/d/1JzRUPGsJZBeT0leTwAqtjAUQvIb7OdxI/view>

## 2.2.8. System Test Plan

Purpose :-

The key purpose of a System test plan is to ensure if different features within an application are working as expected. It helps tester, validate if the software is free of defects and if it is working as per the expectations of the end users.

Use :-

System Test Plan are used at the time of Testing

Document :-

<https://drive.google.com/file/d/1QsjoaFchALHJDklzw5ppGrG-6XrS-uRT/view>

### 2.2.9. Formal Technical Review

Purpose :-

Formal Technical Review ensures that the deliverables generated in the particular phase are correct or not and it also ensures that all the tasks defined in the checklist are completed or not.

Document :-

<https://drive.google.com/file/d/1mWS7NnLyq50f-nNXfRbrdPubhYjbUpjr/view>

## 2.3. Exit Criteria

- Requirements phase can be exited when the customer signs off on the Contract.
- The Formal Technical Review of the phase should have been conducted.
- The suggestions of the technical review have been considered and applied.
- All the required deliverables of this phase have been generated and reviewed.
- The requirements should have been understood very clearly by the development team.

## 3. Design Phase

### 3.1. Entry Criteria

- The Design step of the SDLC process can begin when the Customer has reviewed and then approved the Functional Requirements Document.
- We should have SRS, System test plan, Time Estimation, Risk management, Draft user manual and Test Cases.

### 3.2. Deliverables

#### 3.2.1. Checklist

Document :-

<https://drive.google.com/file/d/1gva3MKot4CPJqCJf-9k2FKm0Fdip8Wye/view>

### 3.2.2. Use Case Diagram

#### Purpose :-

Use Case diagram depicts a high-level overview of the relationship between actors and systems. Its specific purpose is to gather system requirements and actors of our system. Use case diagrams specify the events of a system and its flows. It is the most important aspect to capture the dynamic behavior of the system.

#### Use :-

We used to see how our system interacts with different actors like students, special committee and admin. The diagram also suggests functionalities of the system. It gives an outside view of a system. It shows the interaction among the requirements and actors.

#### Document :-

[https://drive.google.com/file/d/1b9xWGQdBtP\\_nHOASvEQ75BCJ1Z8H3j7V/view](https://drive.google.com/file/d/1b9xWGQdBtP_nHOASvEQ75BCJ1Z8H3j7V/view)

### 3.2.3. Statechart Diagram

#### Purpose :-

Statechart diagram is used to define different states of an object during its lifetime that is it describes the flow of control from one state to another. In simple words it is used to depict the transition of state of an object from creation to termination.

#### Document :-

<https://drive.google.com/file/d/1NX2q9IRtzOgny543R3h7AoudHdy5c9/view>

### 3.2.4. Sequence Diagram

#### Purpose :-

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.

**Use :-**

We used Sequence to understand the flow of the messages passes through the system.

**Document :-**

<https://drive.google.com/file/d/1F4GEfmqXZ5CpcgznKHhwEW9-N8m2pA0Q/view>

**3.2.5. Activity Diagram****Purpose :-**

Activity Diagram visually represent the dynamic flow of control in a system.

**Use :-**

It is used in development part.

**Document :-**

[https://drive.google.com/file/d/1M0uXwCmxsX4wHYslsgnW\\_e3RRBrx\\_EUG/view](https://drive.google.com/file/d/1M0uXwCmxsX4wHYslsgnW_e3RRBrx_EUG/view)

**3.2.6. Data Dictionary****Purpose :-**

Data dictionary is used to provide detailed information about the contents of a database, such as the names of variables, their data types, constraints and comments. Data dictionary can provide the relationship between Tables.

**Use :-**

We created MySQL Database in XAMPP server using Data-Dictionary. It gives the proper structure and information to create database. Table fields, constraints, comments of data-dictionary is helpful to build and understand the database.

**Document :-**

[https://drive.google.com/file/d/1xwaE9sT6N0Ag-lp39X3ghUmJIMlrYq\\_i/view](https://drive.google.com/file/d/1xwaE9sT6N0Ag-lp39X3ghUmJIMlrYq_i/view)

### 3.2.7. Formal Technical Review

Document :-

[https://drive.google.com/file/d/1t9Knel2ni2Q\\_mcl3Jf\\_m0z9g8XWHb4zX/view](https://drive.google.com/file/d/1t9Knel2ni2Q_mcl3Jf_m0z9g8XWHb4zX/view)

### 3.3. Exit Criteria

- System design document is completed and reviewed.
- All the review suggestions have been committed.

## 4. Implementation Phase

### 4.1. Entry Criteria

- Design Documents
- Data Dictionary
- Architecture or flow of the System should be reviewed.

### 4.2. Deliverables

#### 4.2.1. Checklist

Document:

<https://drive.google.com/file/d/11AuaKwd7gZZ1GgOzAZidcU7pckiQBhxt/view>

#### 4.2.2. Implementation Phase Execution Strategy

The entire team is divided into 2 parts being FRONT END and BACK END.

Front-End Team	Back-End Team
Devini sanghavi (201912004)	Bhavesh Surtiyani (201912010)
Varun Lahori (201912009)	Kapil Tailor (201912075)
Honey Shah (201912055)	Aakash Thakkar (201912082)
Mihir soni (201912091)	Meet Shah (201912111)
Vibhuti Vasani (201912110)	Rohan Prajapati (201912113)

#### 4.2.3. Database Creation

<https://drive.google.com/file/d/1p7w9ZqRmfrQc0mU2bxWeiFtESAvEy7bd/view>

#### 4.2.4. Unit Testing Report

##### Purpose :-

Unit Testing is a level of software testing where individual units/ components of a software are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of any software

##### Document :-

<https://drive.google.com/file/d/1PZJJ9BoO-gNkf3ZPYyIbTNUYFDsIIZ3/view>

#### 4.2.5. Formal Technical Review

##### Document :-

<https://drive.google.com/file/d/1Zp8zzT07b8-5y-44K0s21GYEQZqsCZpg/view>

### 4.3. Exit Criteria

- The Development of the system should be done from coding aspects.
- Have a working solution that confirms to the approved design from prior step.
- Unit testing of individual modules should be done.



## 5. Testing Phase

### 5.1. Entry Criteria

- Unit testing of individual modules should have been done.
- All modules should be well tested and they should be functioning properly individually according to the expectation.

### 5.2. Deliverables

#### 5.2.1. Checklist

Document :-

<https://drive.google.com/file/d/1h78CUS5fyW2hZdAHMWfX-KcGtKmKvF0T/view>

#### 5.2.2. Integration Testing Report

Purpose :-

Integration testing is performed to check whether the different modules work fine together when integrated after performing unit testing on individual modules. The purpose of this level of testing is to expose faults in the interaction between integrated units.

Document :-

Integration Testing (Version 1) :-

[https://drive.google.com/file/d/1zw\\_oYVjNh6crzwSz-6Y1TC7ehf2lUgN4/view](https://drive.google.com/file/d/1zw_oYVjNh6crzwSz-6Y1TC7ehf2lUgN4/view)

Integration Testing (Version 2) :-

[https://drive.google.com/file/d/1ZJvJbUgjMot\\_Zd3ms-cSf0oeBQCPhS6f/view](https://drive.google.com/file/d/1ZJvJbUgjMot_Zd3ms-cSf0oeBQCPhS6f/view)

#### 5.2.3. Formal Technical Review

Document :-

<https://drive.google.com/file/d/1qj8AHvUq3mTA8AOa71V1dWo6m18ioGwP/view>

### 5.3. Exit Criteria

- The integration and system testing should be done according to system test plan.
- The test reports should be well generated.

## 6. Generic

### 6.1. Gantt Chart

Purpose :-

**Gantt charts make scheduling more effective because they help managers visualize their resource capacity. This allows them to mindfully allocate people to projects so key resources don't become overworked**

Document :-

[https://drive.google.com/file/d/1D1bsAcZ4NydvsDlbKn4XRdM8OTI\\_2Vnz/view](https://drive.google.com/file/d/1D1bsAcZ4NydvsDlbKn4XRdM8OTI_2Vnz/view)

### 6.2. User Manual

Purpose :-

User Manual is intended to give assistance to user using this system and provides all the necessary information to use this system.

Document :-

[https://drive.google.com/file/d/1GjAPC1D9wAY30iQbni3l\\_Mq91Dv28FqG/view](https://drive.google.com/file/d/1GjAPC1D9wAY30iQbni3l_Mq91Dv28FqG/view)

### 6.3. System Requirement Configuration

Document :-

<https://drive.google.com/file/d/1rhhYsA6DoRDZNxkhYnkocs1NgZIMPt6E/view>

## 7. Conclusion and Future Enhancement

### 7.1. Conclusion

- The DA-Utilities website will be useful to the students of DAIICT when they want to sell something, especially when the student is leaving the institute and wants to sell the hostel inventories.
- The DA-Utilities website will be useful for the students and committees in scheduling the extra sessions and accepting the requests based on the availability.

## 7.2. Limitations

- Unless and until the seller does not delete the item after it is sold, he may keep getting requests from buyers. So the seller has to manually delete the item when it is sold.
- The special committee or the CR has to check the session request and reject or accept for each.
- If the special committee deletes something on sell or rejects any session request then the user who has put the item on sell or requested for session respectively, has to manually check his profile.

## 7.3. Future Enhancement

- Filter Option can be provided so the user can sort the items on sell based on keyword.
- Admin should be able to sort all the items that have been reported from the rest.
- We can add comments section in Session Interface where students can give feedback on the sessions.
- We can provide Polling Feature so that the conductor of session can know how many students are interested.
- To overcome the issue raised in 8.2.3, we can provide the facility of notifications.

## 8. Learning Documents

- <https://drive.google.com/file/d/1UbKmnNpAeZ6Zs1iLyJ2WnFzNomgi0LxR/view>