Institution Management System

# System access

We can give access to

1. **Admin**: The soul authority to do things.
2. **Teachers**: The authority of educational data and access to all data.
3. **Parents**: They can access all the data of all their dependents.

**\* Providing authentication for every stakeholder needed a proper cloud services. Firebase could be better choice for us.**

***“ I prefer to use email link authentication as it will make it more secure and easy for verification every time.”***

# System Levels

**Level-1:** Admin authentication. (Both **online** & **offline** methods)

**Level-2:**  Teacher authentication.

**Level-3:**  Parents authentication.

# Features

1. Activity logs.
2. Login & Registrations.
3. Notifications & reminders.
4. Student’s details & documents.
5. Staff details & documents.
6. Admission process.
7. Student’s payment data. (fee categories, concession)
8. Institution’s transaction data. (vouchers)
9. Progress data of a student with link.
10. Teacher’s attendance.
11. Student’s attendance.
12. Time table generation.
13. Syllabus planning.
14. Examination Planning. (Admit cards / Due list / Sitting plan)
15. Tours & extracurricular activities.
16. Upgrade functions.
17. Dashboard & Accountings.
18. System Backup.
19. Cloud Backup.

# Security features

1. System Backup
2. Cloud Backup
3. Activity logs

# Activity logs

This records every action on the system. So that **no error occurs** & there will be a **transparency** in the system.

Are we going to have a single datasheet for all the activities?

Yes, we are doing. So but with attaching the ID of the person from LOGIN sheet.

**Example**

Transactions sheet

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | Amount | Mode | Sheet ID | Link ID | Activity ID ***(FK)*** |
| 0001 | 5000 | SBI | STUD PAY | 005 | 0001 |
| 0002 | -2000 | CASH | VOCH PAY | 008 | 0002 |

Activity sheet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Comment | Prev ID | Time | User ID |
| 0001 | 5000 Paid by - to – for stud payment | - | 02:11:2021 ; 05:30:PM | 1 |
| 0002 | Given to – by – for voucher | - | 02:11:2021 ; 05:45:PM | 1 |

We have modified the first transaction to 10000 due to an error in entry.

**After Change**

Transactions sheet

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| ID | Amount | Mode | Sheet ID | Link ID | Activity ID  ***(FK)*** |
| 0001 | 10000 | SBI | STUD PAY | 005 | 0003 |
| 0002 | -2000 | CASH | VOCH PAY | 008 | 0002 |

Activity sheet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Comment | Prev ID | Time | User ID |
| 0001 | 5000 Paid by - to – for stud payment | - | 02:11:2021 ; 05:30:PM | 1 |
| 0002 | Given to – by – for voucher | - | 02:11:2021 ; 05:45:PM | 1 |
| 0003 | 5000 modified to 10000 due to an error in entry | 0001 | 02:11:2021 ; 05:55:PM | 1 |

Here,

1. We have added a new activity log for the modification.
2. We have given the initial transaction’s activity log ID to new activity log as a pervious log ID.
3. We have updated the amount to 10,000 in both STUD Pay & transaction Sheet. We have updated the new log ID to the transaction.

**Logic:**

We can recursively get to know an activity logs of any transactions completely.

**Further expansion - Questions:**

How do we make the access levels for the user? Designing a separate design for them.

# Login & Registrations.

Here we have **three sheets based on user level**.

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Mail** | **Password** | **UserID** |
| 001 | [Rpranayreddy40@gmail.com](mailto:Rpranayreddy40@gmail.com) | 537537537 | 500 |
| 002 | [Rpranayreddy40@icloud.com](mailto:Rpranayreddy40@icloud.com) | 537537537 | 200 |

Here, **User ID is a foreign key to the stakeholders sheet.**

*Stakeholders sheet gives a unique ID to every user in the environment.*

**\*\*Password can be encrypted.**

# Notifications & reminders.

This sheet serves the purpose of both notification & reminder.

Where reminder is just a customized notification.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Created Time** | **Trigger Time** | **Iterations** | **Duration** | **Level** | **Action** | **Text** | **User ID** | **Done** |
| 08:05:00 AM; 02/11/2020 | 10:00:00 AM  01/01/2021 | -1 | 1 year | 0 | 005 | Happy New year. We wish….. | -1 | Yes |
|  |  |  |  |  |  |  |  |  |

Here,

**Created time:** time of creation.

**Trigger Time:**  When to pop the notification.

**Iterations:**  no of time it should be triggered. (“-1” is a loop iteration)

**Duration:**  duration of the iteration.

**Level:** This depicts its importance.

*0 : only in the notification bar*

*1: pop up and stay for x mins and then disappear.*

*2: Action needed. (No close button available)*

**Action:**  link of the action (a new table can be created or cane be given a link here it self).

***But to have a simple action table. So that if needed to change a link address change be done in time.***

**Text:** Message.

**User Id:**  who should be getting the message.

-1 or any other character: send to all (Parent, Teacher & Admin).

-2 or etc.: Send to staff and admin.

-3 or etc.: Send to all admins.

***\*\*\*We can send a reminder to particular stakeholder at particular time. So that it works as a mail too. Then pop-up will not be action. But, it will take us to notification. Then the entire message comes and the click will take to action***

***(or) Create a new similar table to reminders.\*\*\****

**Flow  
We need to create holidays table to have attendance in it. We have to not include holidays in the notification. Because it cause the problem when holiday is only for primary.   
So, we are just making holiday table also as notifications. Where notification system also checks holiday’s table.**

# Student’s details & documents

In order to join. We have to create them Tuples in these tables:

1. Stakeholder
2. Student details
3. Attendance
4. Student Balance
5. Progress

Basically, **Stakeholder table contains unique ID for each person.** *So, that when clubbing all person like in attendances sheet or notification sheet. Then their won’t be same ID for different users.*

Here, we create a **student details** table containing just photo.

**Student details** parameters:

1. ID
2. Stake ID
3. Name
4. Class
5. Roll no
6. Photo Id or so.
7. Merit-based concession
8. Other basic parameters