

Design Document for *Absent.io*

(A working name for an evolving project)

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Pitch:

Day in and day out, students are entrusted with a lot of responsibilities within a school. From traveling between classes and taking notes, to preparing for exams and completing projects, there is a lot that is constantly on their plates. ***Let's not let excused absences be one of them.*** Absent.io aims to reduce the paper trail, and thus the mess, that schools unfortunately have to force on their students. By digitizing the process of handling absences not only do we save resources (#savethekeys), but we also get the chance to move this process into the 21st century; all while lessening the load on our hardworking students.

Summary:

Absent.io will bring all aspects of attendance tracking and absence filing online.

MVP

The project can be broken down into three main components, each relating to a different user:

Students:

High schoolers will use the program to submit excuse notes for days they were absent/late. This will be done by selecting the day of the incident, and then digitally filling out the form. At the conclusion of the filling, the form will be sent to the student's parents' accounts for verification and a digital signature.

At the end of the cycle, when the form possessed by the student has all necessary signatures, they send it in to the attendance office.

Parents:

Parents of the students will have accounts linked to their children. As a student submits a form for approval, it automatically is sent to the parent account to receive confirmation. Here, the parent is able to open the form and see all the information the student is filled out. If deemed accurate and acceptable, the parent may add their digital signature and submit the form to the site once more. If not, the parent can reject the student's submission.

Teacher:

Classroom instructors will use the site to verify and accept the excuse notes submitted by the students. At the conclusion of the parent portion of the excuse note cycle, the form is again

submitted to site, but this time complete with parent signature. At this point, the site will send a copy of the excuse note to all of the teachers listed on it simultaneously. Now the teachers are able to read the form and decide whether or not to accept it. If they do accept and provide their digital signature as proof, a copy of the form living in the student's account is updated with the signature. If not, they can directly contact either the student or the signing parent.

For further expansion...

Students:

The site will function as eschooldata currently does for the student. Namely, attendance (such as absences and latenesses) will be shown on a calendar hosted on the student's main homepage. This calendar will be updated daily with the new day's info, along with any changes that have occurred on previous days due to the completion of excuse form processing.

Teacher:

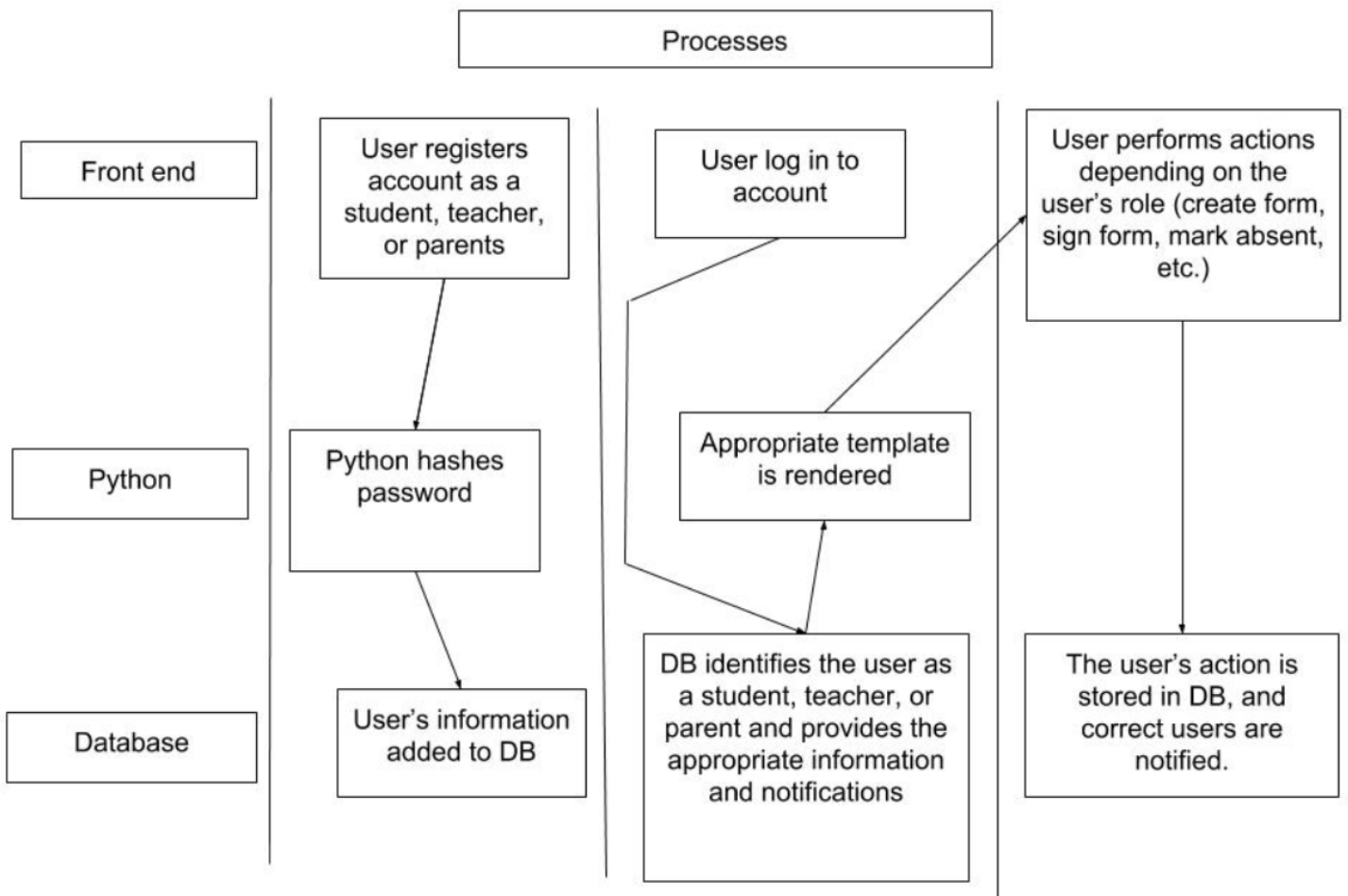
Educators on the Absent.io program will take attendance through the site. The exact way this will occur is unknown, but two main proposals have been created:

1. Teachers will have their class data (including period and students) visible on the site, and will take attendance directly through the program. This will be done by selecting which students are absent/late throughout a period on a form, and then submitting it. This information will then be printed into the typical attendance forms that teachers have.
*(*This proposal requires some conversation and hashing out with Ms. Pedrick*)*
2. Teachers will fill out the physical attendance sheets as currently being done, but will upload a picture or a scan of the document at the end of the week. The picture will then be analyzed to find out which students were absent/late, and recorded on the site.

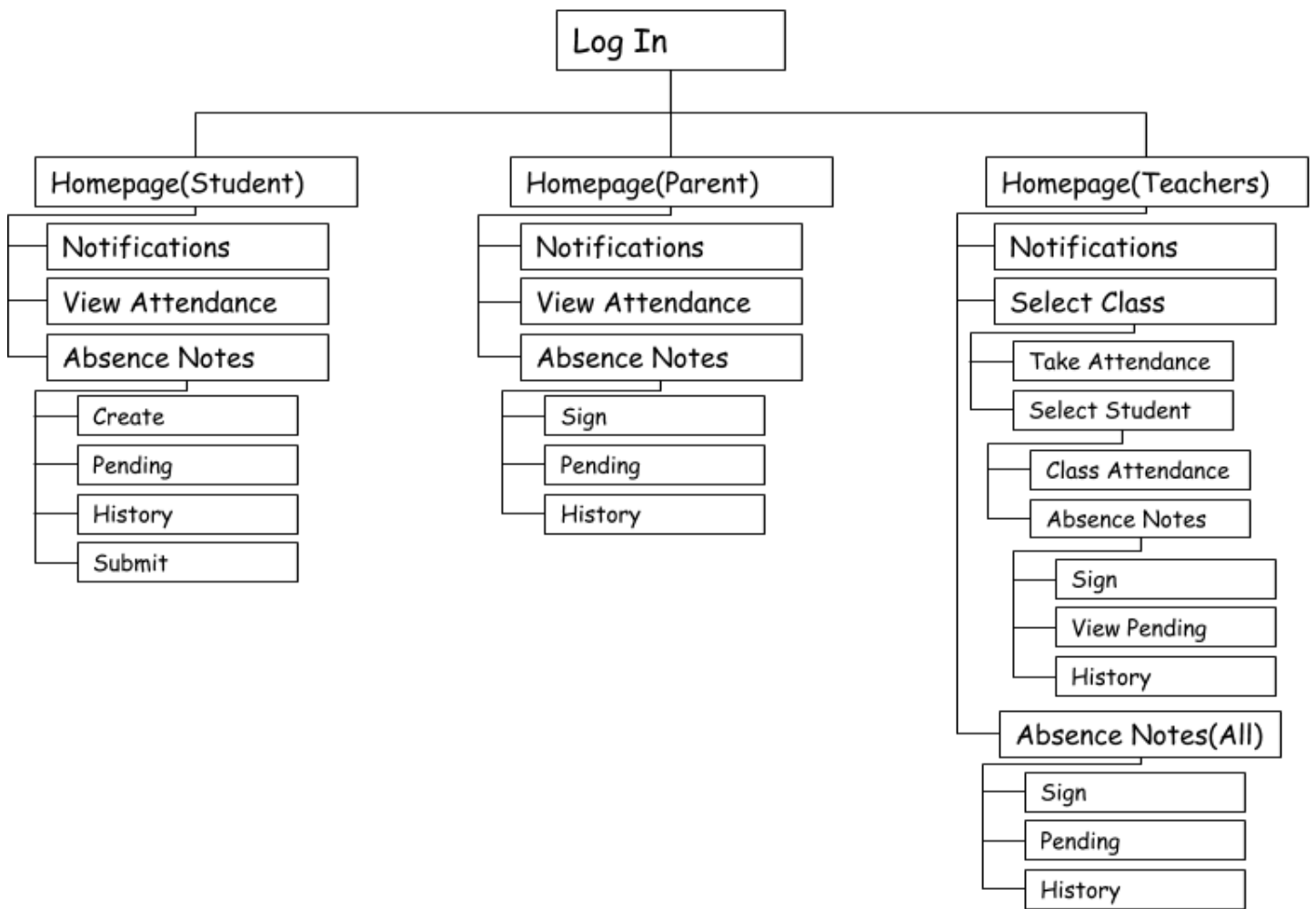
Roles (for the MVP):

- Ibnul (Project Manager)
 - Roles of a PM (communicating with the outside, submissions, time managing)
 - Integration of account systems / splitting the form into pieces to send to teachers
 - Updates to student accounts as excuse cycle progresses
- Caleb
 - Creation of the parent side account system / parent-form interaction
 - Adding digital signatures to the form / parent-teacher interaction
- Anish
 - Creation of the student side account system / student-form interaction
 - Putting together a student's class list / form creation and initial completion
- Jasper
 - Creation of the teacher side account system / teacher-form interaction
 - Putting together a teacher's class list / form finalization and confirmation

Component Map:



Site Map:



MongoDB Database Schema:

Accounts

```
{ "Id":  
  "Username":  
  "Password":  
  "Type":  
    (parent/student/teacher) }  
... (one document per  
account)
```

Student (one collection per student)

```
{ "Id":  
  "Period":  
  "teacher_id":  
  "Attendance": {  
    "Day1": {  
      "Present?": T/F  
      "Excused?" T/F  
    } ... }  
} ... (one document per  
class)
```

Teacher (one collection per teacher)

```
{ "Id":  
  "Period":  
  "Course_name":  
  "Students": [ids]  
  "Attendance": {  
    "Day1": [ids of absent  
students] ... }  
  "Notes": {  
    "Note_id": { "signed?": }  
  }}...
```

Parent (one collection per parent)

```
{ "Id":  
  "student_id":  
  "Notes": {  
    "Note_id": { "signed?": }  
  }}...  
}  
... (one document per  
child)
```

Absence Notes

```
{ "id":  
  "student id":  
  "Parent id":  
  "Date":  
  "Reason":  
  "Courses": {  
    "Course name": {  
      "Teacherid":  
      "Period": } }  
  "Signed by student?":  
  "Signed by parent?":  
  "Teachers signed": [ids] } ...
```