SRD

* EDITED

*It Depends*

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* Proposal Name

*Hi-Tracker*

* Vision

*Here, there, anywhere you want to go, we'll help you get there.*

* In Scope

IS 4.1

The Attendance Management system addresses many problems that is faced with Middle College High Schools attendance issues. It will provide the framework to better organize and track students attendance as well as provide ways to positively reinforce students involvement in their school community.

IS 4.2

This system applies only to attendance tracking of students for system administrators.

IS 4.3

The system will provide detailed reports of students to administrator tracking any attendance streaks. As well as any statistical data that remains necessary.

IS 4.4

This system will provide a simple check-in design where student click and drag their name from the “Not Present” to “Present” box and vice versa when leaving.

IS 4.4

Upon Check-in students will receive a quick notification congratulating them on their attendance streak. This provides just a boost of encouragement for being in class that day.

IS 4.5

Administrators will have full access of student profiles to ensure correctness of statistics. They will have tools to manipulate data or change results as necessary.

IS 4.6

Admin requests having pictures associated with students names and or attendance profile. Therefore both students and administrators will have the ability to add pictures to profiles.

IS 4.7

A simple username and password for each student will be within the requirements of this solution.

Every student and Admin will have their own login account.

IS 4.8

At the end of the day if there any other students still logged in to the system. They will automatically be logged out of the system.

IS 4.9

At the end of the year a student’s information will be rolled over and archived into a saved document.

* Out of Scope

*Bulleted list of the features your system will NOT support*

OS 5.1

Students will not have private access to the terminal page as only one in class terminal accessed by the admin will feature that capability.

OS 5.2

Reports of students academics will not be included in student profile report. This is an attendance tracking system only other things are not implemented.

OS 5.3

Admin page will not have real time attendance updates of who is in the classroom. Admin will only receive daily reports of attendance. Real time is not a feature requested or necessary as teachers can see who is currently in their own class.

OS 5.4

Students academics and requirements will not be associated with the reports. This is a motivational tool for students so any time that we can submit positive feedback and milestones to students we will opt for that data.

OS 5.5

Students will not have access to change or manipulate their data. It will only be one page that allows students to check in and out of class. Otherwise access to data changing will happen on an admin page.

OS 5.6

Students will not have access to their standing of attendance compared to other students. This is meant to motivate students with their own individual progress. Other data or comparisons are not necessary.

OS 5.7

External security and storage requirements will not be handled within this solution. This solution is an in house solution, with time and capability restraints security and network architecture is not going to be implemented.

OS 5.8

Further maintenance of this system also remains out of scope for the requirements. Because of time constraints full implementation may be an issue. Everything will be fully detailed in final presentation.

* Key Features

*Key feature, and brief description. These are the features that you will use to “sell” the solution.*

|  |  |  |
| --- | --- | --- |
| ID | Feature | Description |
| *FR1* |  |  |
| *FR2* |  |  |
| *FR3* |  |  |

* Personas

Student Persona

*Needs:*

*Alex is student and he is 21-year-old. He is in this class because he was spending 3 years in jail. So, he is not able to go back to Garfield High School, because he is not qualified age-wise. He was a good student before but because of the family situation, he fell into the jail for some personal reasons and now he is smart enough to understand the materials, but he arrives to school late because he doesn’t feel like coming to school. He thinks that he can get a passing grade even without attending to class but he attends just because. He also leaves the class early sometimes cause his friends are in college and he want to hangout with them. He can stay longer at school but he gets bored with the materials and prefer to leave because attendance doesn’t really monitor by school, so why not?! Anyway, he needs his passing grade because it’s his last chance to get the diploma. Alex gets along with some friends in his school too. But they are younger and they can’t grab a drink, so they stay at school after he leaves.*

*Solution:*

*There should be a reason for Alex to come early or stay longer at school. Alex thinks that if he finds a good and interesting way to spend his time with his classmates, he doesn’t mind if he stays longer and participate in the classes. Since he really wants to get good grade and finish his high school, he receives extra credit for attendance, he would stay and he would be more on-time. But at the same time, he thinks he is too old to be treated and monitored by school teachers. One of his goals is getting his high school degree and apply for the Washington State University because he wants to live in a new state for having some new adventures. If he can get better grades, he can apply for the University of Washington. That’s why he loves to get some extra credits for attendance because it can improve his grade and can be in the list of competitive students.*

Administrator Persona

*Genie is a 65 year old woman who was never able to have kids of her own but always wanted them. She spent most of her late 20's - mid 50's housing kids in the foster system. She neeed to stop, although it wasn't easy, because it was just getting too difficult to manage a house of kids and teenagers 24/7. She loved feeling like she was making a difference in the lives of the next generation, and seeing breakthroughs in kids whom at one time felt lost and alone. Rather than give up completely on her greatest passion in life, she decided to get a teacher's liscence and began teaching at a new alternative school for foster kids or those who had nowhere else to go. This is where Genie currently works and she loves it. She never thought anything could fulfill her as much as fostering, but she thought wrong. The only difficulty is actually getting the students to class - on time, all day, everyday. She understands why a lot of the students miss class, but also wants to provide structure in students' lives which are a bit more chaotic than anyone could handle, much less a kid. She doesn't want to scold or force her students to come to class because she doesn't want school to have any more of a negative connotation than it already does; rather she wants to change the way these students think about school to where they look forward to it so much that they are there pretty much every day and are well engaged with materials as well as each other. Her mother used to say something about how going to church rarely ever about God but is always about the sense of community, and she finally understands that now. Genie wants class to become her students' church. Because she teaches in a school, she needs to keep attendance, but doesn't want the attendance tracking to discourage her students who have a difficulty showing up to class as it is. She knows that she would liek to keep track of the time spent in class but doesn't know much else other than she wants it to be tracked on a computer somehow. Although she knows how to Google her questions when she has them, she would definitely not consider herself a computer wiz. She still has a rotary phone at home and a television with bunny ears at home, so something simple like that would be preferred.*

* Scenarios

Student Scenarios

* It’s 8:55 and Alex is running to the campus. He woke up late because last night was the birthday of Laden, his childhood friend that she just turned 21. They were at the bar drinking with other college students at the University Ave. Because of last night plan, Alex slept so late. He arrives to the class but there is couple of students waiting in line to talk with the teacher (Mr. Taylor). Mr. Taylor asks him to turn around and check in on the laptop, on the side desk. There is a little space there to standing by the laptop but that is ok for Alex since it doesn’t take that long. The “HiTracker” webpage has all the name of students. He looks up and see who is still not arriving. Seems like everybody already arrived. He doesn’t want to show that he has headache for being hangover of last night, so he prefers to just do what he should do. He drags and drop his profile picture to the top section from the bottom of the page and walk toward his seat. He likes the way that this webpage doesn’t take too long, or complicated. Also he prefers not talking to anyone since he doesn’t feel right most of the morning. Now, all good and Alex is waiting for the class to be started at 9. He starts texting to Ladan: “Danng I woke up late but I ran all the way to school. I am half sleepy half hangover. LOL”. Around 11, Alex is on his phone, playing candy crush cause the instructor talks so much and he can read the lectures later. He got a msg from Ladan: “LOL, wat you doing for Lunch, we wanna go that thai place in the ave, you wanna join?” Alex replys: “ I should do another checking at 1:30, after that I can just sneak away LOL”
* SS2

Administrator Scenarios

* Genie arrives to class at 8:50 am and is excited to try out this way of trying taking attendance, but also nervous because she hasn't really been taught how to use the computer program and she got to class a little bit later than she hoped to that day. She was told by the principal that it would be easy because all that she'd have to do was double click on the AttendanceTracker icon which was already set to the desktop screen to open the program. Then that she'd have to click her picture when the window popped up on the screen which would open up a text box below it asking for a password, which is her birthday (April 29, 1946 as 4291946). Genie puts her bag down on her chair at the front of the classroom, her coffe on her desk, and the tomato bisque she brought for lunch in the mini refrigerator under the teacher's desk, and then heads to toward the computer next to the door. Genie looks for the power button to turn on the computer for a couple minutes before chuckling when it turns out the power button is actually underneath the screen. After the computer turns on and she is looking at the desktop screen, she sees the AttendanceTracker icon (and label) in the third row all the way to the left of the screen and double clicks it - this is the moment of truth. A window pops up after about 3 seconds and she sees a horizontal row of pictures of the faculty, with herself in the second position. She clicks her picture, then types her birthdate in the textbox that appears below her picture just like she was told it would. She clicks the button that appears to the text box that says "Log in!" and is taken to another screen that has pictures of all the students in one box to the left of the screen, and an empty box on the right, with text at the top saying:

Students! Mark youself present by clicking and dragging your picture from the left box to mark yourself present, and the other way when you're ready to head home for the day!

~ Love, Ms. Genie

Genie turns and heads back to her desk, proud of herself for being able to start this new attendance taking method, and relieved that it was easy enough that she didn't have to look like the confused old lady who didn't know how to work a computer.

Scenario for clocking out:

When class ends and students are heading out of the classroom, Genie heads over to the computer near the door. She was told how to start the system, but not how to end it, if it even needed to be ended. She steps up to the screen and begins looking for anything that might indicate that she'd have to do something once her class ended. She then sees in the top right corner of the screen a button about the size of a chubby eraser with the text, "Click here when class ends <3", and so she clicks it. The window for the program goes blank all except for some text in the center with the words "Thank you, Genie, for all your exceptional work that period :)" which shows for a couple of seconds before blinking back to the initial faculty login page that she saw when she first opened up the program. She likes this new way of taking attendance and enjoys the fact that her students will feel a little more ownership of their attendance as they're the ones marking themselves present. Genie then heads back to her desk to finish her coffee and read her book a little before her Advisory begins.

* As Genie gets back home after a day of school and a trip to the grocery store, she remembers that she noticed that Jason hadn't been in class for what feels like a week now. She decides to check on his attendance statistics really quick before putting her groceries away so she puts her things down in the kitchen and walks into her living room where there's a desk near a window with her laptop on it. She opens her laptop, clicks on the Safari icon on the bottom of her screen, and types myschoolsattendancereporter.com into the website box at the top of her Safari window. Genie is taken to the homepage which shows the faculty pictures in a row toward the top of the page and then the students pictures lower on the page. She assumes that logging in to this site is the same as the program at the school and luckily she was right (or maybe it wasn't luck ). She's taken to a screen that has two buttons: "All Students" and "Select a Student". Genie decides to click on the "Select a Student" button, and when she does a list of students' names in first-name alphabetical order appears with their picture just to the right of the name. Genie scrolls down until she sees the Jason and his picture then clicks it. The screen refreshes and the button now says "Jason McDonald" and just below it is his picture, three buttons (last week, last month, last year), some text saying "Showing this week:" with Jason's attendance statistics for that week. Because Genie is more curious about how much he's been showing up over time, she clicks on the button that says "Last Month" and the page refreshes again showing Jason's attendance statistics over the past month. She sees that Jason had a streak of 12 days in a row of coming to class, but had also missed the past week and a half of school, and on average he was staying in school for about 5 hours per day. Now she really begins to wonder if something is wrong with Jason, so she connects her computer to her printer and clicks the button at the bottom of the webpage that says, "Print Report for Student", right next to the button "Print Report for Faculty". When the printout comes out of the printer she's relieved to see that not all of the statistics are on the sheet like "Most recent missed class streak". Genie plans on having a chat with Jason about why he's been missing a little more class than usual and congradulate him for him how well he's been doing. Genie then scrolls up to the top of the webpage and clicks the "Logout" button at the top right and closes her Safari window to go and put her groceries away.
* Site Map Student

*Overall map of the Student Portal and how the pages connect to each other*

* Wireframes Student

*Wireframes for the section, must have major functionality called out on the wireframes. Everything in the scenario, and Key features must have wireframes.*

WS1

WS2

WS3

WS4

* Functional Requirements Student

*List all functional requirements the system must support, provide the ID, requirement and description*

FRS1

FRS2

FRS3

FRS4

* Site Map Administrator

*Overall map of the Student Portal and how the pages connect to each other*

* Wireframes Administrator

*Wireframes for the section, must have major functionality called out on the wireframes. Everything in the scenario, and Key features must have wireframes.*

WA1

WA2

WA3

WA4

* Functional Requirements Administrator

The administrators require the following functionality from the system:

Login/Logoff

Ability to click a student's name or picture and see a report of their attendance

Ability to see overall statistics for the class.

Ability to adjust students' statistics as they see fit

The ability to select a range of dates or a time period over which to generate statistics

3.1.1 Login/Logoff

The login for an administrator will consist of a system login for administrators including a password. Logins will expire 30 minutes after login, unless previously terminated by the administrator to ensure privacy of students' data.

3.1.2 Ability to click a students name or picture and see a report of their attendance.

Reports must be generated for all students enrolled in the school. This can be further broken down into components of the report:

3.1.2.1 Picture or name:

A picture of the student will be available to be selected on loading of the login of the admin. The admin will then select the picture or name of the desired student.

3.1.2.2 Invidividual Report

The report must include the following per student:

The name of the student

The student's ID number

The student contact information (phone number)

The age of the student

Number of hours in school out of total number of potential hours since enrollment (this should include a graphical representation for ease of use)

Average school hours per day that student attended that week

Average school hours per week for that student since enrollment

That student's highest hours spent in school week (Their best week)

3.1.3 Overall Report

This overall report should include for the whole class:

Average hours attended that week.

Average hours attended that month.

Average hours attended that year.

These statistics will be alongside the total teachable hours over those time periods.

Should show these statistics in a graphical form to show trends and aggregations of statistics for metrics such as by day.

3.1.4 Ability to adjust students' stats

The admin must be able to adjust the user's statistics on an as-needed basis. This will include how many hours they attended on a specified day.

The admin must be able to adjust the sense of what a full day is, and adjust the schedule for "professional days" and other aberrations in the school calendar.

3.1.5 Ability to select a range of dates/times

The system shall allow the administrator to select a range of dates through which to filter the results for the student. This date range selection will override the default stats output, and not be required.

3.1.6 Ability to print a summary

The system should allow the administrator to print out a summary of statistics to go over with the student or be emailed in simple form to a parent. This will mirror what the student would see on their status page.

The system shall not include all the statistics that the admin would see as these may be negative. The system will not show any statistics not belonging to that student for comparison or any other reason.

* Non Functional Requirements

*List all non functional requirements that the system must support, provide the ID, requirement and description*

NF1

NF2

NF3

NF4

* Technologies utilized

*Describe in detail the technologies used in the system. For example: HTML 5, CSS, Bootstrap, JavaScript, ASP.NET MVC, Document DB, Azure etc… Include any nuget packages or libraries used.*

* System Architecture

*Diagram of the system architecture and how the system components fit together.*

* Physical Architecture

*Diagram of the physical architecture*

* Class Design

*Make a class diagram including the properties and methods for each major component. All data elements must be on the class diagram*