

Criterion A

Defining the problem

My **client** is a Spanish tutor Alicia Rodriguez. She is 53 years old and tutors any high school student within a 10 mile radius of her house and tutors multiple students in one day. She keeps all her tutoring sessions logged on a small, notebook calendar.

As stated in the email conversation I had with her (refer to Appendix), her system tends to cause multiple problems such as smeared ink from pens and fading marks from pencil. When she has to tutor multiple students at different times in one day, the writing becomes crammed into one small box. The illegibility of her tools keeps her unorganized and leads to conflicting and overbooked appointments, causing her to miss them. These missed appointments mean lost income. Also, it is inconvenient for her to remember to remind her students in advance **every time** via email. Many times she ends up sending reminders on the day off the scheduled session, leaving students inadequate time to prepare their work. This leads to even more issues because without the necessary work prepared, they do not get the maximum help out of their tutoring. From inadequate preparation, Mrs. Rodriguez has to improvise mediocre lesson plans, which also wastes the student's money. These adjustments also make her appear as unprepared and ruins her reputation as a competent tutor.

Mrs. Rodriguez's current method of organization obviously has many direct and indirect consequences for her and her students. Using a computer applications can save both parties money and time.

Rationale for the Proposed Solution

I confirmed with my client that she is comfortable using a computer. My software will be made using java. Java allows me to create an object oriented design with a high-level language. Java is beneficial because of its simplicity. For example, unlike C++ it does not have pointers or enumerations. More importantly, it is the most commonly used language and is compatible on nearly all devices. NetBeans IDE (Integrated Development Requirement) because it makes creating GUI applications simple. The drag and drop feature makes adding buttons and layouts for GUI much easier. The simplicity

of NetBeans will allow me to spend more time developing an efficient algorithm instead of designing. Text files will also be required to save array list data that holds student and appointment information. Because text files do not have any restrictions for access, creation and modification, adding them to the hard drive is much easier. Also, because Mrs. Rodriguez is usually at home with her laptop, it is highly unlikely that she will miss a reminder from my software. My proposed solution will have to be opened manually when turning on the laptop. If the window is minimized, it will still run in the background to send her reminders. The program will also prevent any overlap between sessions and save her the stress of figuring out if she has time for more sessions. All in all, the primary goal of my software is to make Mrs. Rodriguez's job more organized so it saves her stress and time.

Program Success Criteria

Criteria	Goal of Criteria
A	Main menu is able to open.
B	New students can be added.
C	New appointments can be added.
D	All the Student information is displayed correctly in a list and in alphabetical order.
E	All the Appointment information is displayed correctly in a list and in chronological order. Appointments added are valid appts: do not conflict other appointments and the date of appointment is not in the past.
F	Students can be searched based on first name, last name, phone number and/or email address.
G	Appointments can be searched by narrowing down the year, month and date.
H	Students/Appointments can be removed one at a time or multiple at once.
I	Appointment/Student information can be edited.
J	A reminder is sent via a popup/alarm within day before an appointment.

Word Count: 500