

## Criterion A: Planning

### Defining the problem:

My client, Ms. Goppert, is a teacher who works in the art department of British International School Hanoi. She is in control of the art room and all of its equipment along with the other teachers from the same department. The amount of equipment to keep track and control is not a small number as art is a subject that requires a variety of different tools and material to work with.

However, as there are more students starting to do art over the years, there are more demands for the art equipment as there are more projects to be completed so keeping track with the rented equipment had started to become a problem. To be more specific, there are more renting happening and she needs something to monitor check ins and checkouts and also to alert the borrowers to return their item on the set return date.

Presently, she had attempted to find a solution herself, by using sheets of paper to keep track of it but it proves to be inefficient due to the fact sometimes forms are not available and the students can be forgetful and she still needs to find and contact them to retrieve it back.

As a result of this, she had asked me to produce a program to reduce the time wasted and makes a simple platform to keep track of information on rented items. My Computer Science teacher, Mr. Toner had agreed to be my advisor on this project.

Word count: 246

### Starting Success Criteria:

1. An input that allows the user to fill in their names, email addresses, form tutor when borrowing an item.
2. Program will provide a list of items that can be borrowed and display its total stock.
3. Program will be able to send an email to alert the borrower to return the item.
4. Program must be able to have a login/register interface.
5. Program must be able to let the user borrow an item and then save a record of it.
6. Program must include appropriate dates and time (school days and break/lunch time) for the user to choose when to return the item.
7. Program must be able to send an email to the student when they borrow an item.

### Rationale for proposed solution

I think building the program on a Java platform rather than other language like Python or C will fit to be a solution to her problem as Java is object-oriented and its abstraction can help provide a simple and easy to use system without looking too much into the complexity of the program so the students can learn how to use it easier. Java can also provide a graphical interface so operations like add and remove can be integrated with an easy to use button. Furthermore, Java programs can work on different operating systems without many modifications to the code as it is platform-independent (unlike C) so it can be convenient to use on different platform as my client use an Apple computer while I use a Windows laptop which had different OS so installing a Java Virtual Machine should solve the problem. Also the program is done in Java because this is the language I'm currently learning in school and I have Netbeans IDE, which is an easy to use Java Integrated

Development Environment. It provides a customizable workspace that can assist me in the coding process.

At first I decided to make the system online, but then I think that it would raise the complexity of the program too high, and the accessibility and security are not guaranteed online every time so I decided to make a program offline that can be download and available to the art teacher.

Word count: 241

Total word count: 487