Criterion A

Scenario

The candidate works at an indoor children soft play area. The client Ms. XX is my manager. Revenues for entrances are collected in cash and registered on a custom-made stock system for these transactions. The candidate has met multiple issues using this software, they are:

1. Having to track walk-ins on a pen and paper since the system only carries the functionality of a cash register.
2. Reporting the correct amount of cash revenues due to inaccuracies and errors in the current system. The amount of cash and the balance given by the software often do not match leading to conflict between the employees, management, and the accountants.
3. Not being able to always keep enough change in the cash register.

XX states that the best intervention is to implement a cash-free scheme for the business. She wants a software that accepts a card as a form of payment. Customers should buy this card from the reception and deposit money into it. They can then pay for entrances using the card.

The Solution

The breakthrough is an application that manages these cards. In other words, it should create them, store them, and change their balance after deposits and purchases. When the customer deposits money into the card, the program adds that amount to the card's balance. After each purchase, the invoice is deducted from the card's balance and added to the reception's revenues and reports.

However, developing this system means that the current software will become redundant, because their design does not support the new cashless play card scheme. So, my application not only introduces a play card scheme to the business but will also carry the functionality of a cash register.

Rationale

The candidate choses Java for this project. As an Object-Oriented Programming language, Java provides encapsulation that ensures that classes are self-contained in terms of attributes and methods. This allows for modular programming, a project management technique that involves categorizing different aspects of this project into modules that the candidate can develop and test separately before joining them together.

Not just, but Java holds a multitude of GUI libraries and platforms that support the easy creation of rich graphical interfaces and applications that can run widely across devices. Even though it is harder to efficiently manage memory in Java as compared to some other languages such as C++, Java is the only language that offers the number of libraries and tools it provides with its performance.

The Success Criteria
As determined by the client, the application should:

1. Handle purchases including card purchases, card deposits, walk-ins, etc. and keep track of the cash register and play cards' balances.
2. Perform transactions quickly and efficiently by minimizing wait times.
3. Generate reports for registered walk-ins and view the cash register's balance.
4. Ensure the security of customer information by using authentication processes to prevent unauthorized access to others' play cards.
5. Have a user-friendly interface that is easy to navigate. Staff should be able to buy and deposit money on play cards easily.
6. Store play card information permanently.