

# IB CS IA Proposal

## 1: PROBLEM DESCRIPTION

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While working at the Ontario Science Centre, I noticed challenges in accessing large number of visitors and members. The Science Centre consist of a great number of visitors and therefore an efficient organized system is needed to record the activities of regular visitors, members and employees clearly and separately. Activities such as borrowing a wheelchair or recording a lost and found require a faster way of recording and accessing. Moreover, the access of information modification need to be specified - different positions have different access levels. The problem is finding a better way to deal with the storage and access of visitor's and inventory information with time constraints. "How can workers assist visitors more efficiently at busy moments?" and "how will these activities be summarized and displayed?" are the main questions to be dealt with.

## 2: PROPOSED SOLUTION

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A designed program will not only easy access of information, it will also be stored and accessed at other locations in the Science Centre. This program will be replacing paper recordings, it will aim for easy accessing of visitor's information, which includes quick search of members and the storage of a complete dataset of visitor's information. It will also be capable of recording new information such as the number of customers, inventories and lost and found. The information will be able to be access by all employees, however modifications such as adding members into the system will only be used by certain users. For the purpose of saving time, the display of the program should be clear and precise, and will be designed with the consideration of touch screen access.

## 3: FUNCTIONALITY

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- Store members' information such as legal names, type of membership, the allowance of that specific membership, membership number, date of when the membership card will expire, home address, email, phone number and etc. (possible extension: storing a photo as well).
- Search up a member by their name, email, phone number, membership number and etc.
- Able to determine whether a membership is expired.
- Add a member/ remove a member
- Record the number of visits per membership holder (number of adults, infants, and children per family)
- Modify a member's information
- Record the number of school groups and other big group show ups.
- Sort members by name
- Storage of available wheelchairs and strollers.
- Modifies the number of available wheelchairs and strollers
- Record the borrowers of strollers and wheelchairs.
- Storage of lost and found items and their description
- Modifies the lost and found list by removing checked out item and adding turned in items.
- A record of lost and found items and returns for the past 30 days.
- Import members information from a text file

- Export members information from the program to a text file after use.
- Able to count the number of regular visitors by the number of seniors, adults, children, and infants.
- Return a precise daily summary of number of visitors (seniors, adults, children, and infants), members.
- Display the names and schedules for the employees in charge for that day
- Display a list of contact information (which can be only accessed by employees)
- Include access restrictions to modifications, a password is required for example.