

Development of Information System for Constance Hospitality Academy

This assignment includes the following phases:

Phase 1: Identification of needs and creation of concept proposal.

Phase 2: Defining scope or boundary of concepts

Phase 3: Planning the implementation of the concept proposed

Phase 4: Requirement Analysis

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INTRODUCTION

Constance Academy has already improved their communication system through a Local Area Network, and a connection to CHSL through high speed internet and a private internet line for Lotus Software (a software that provides mailing service) that links CHA and CHSL via CLPM. But the need for creating a database to computerise all the activities here is becoming more and more urgent. In order to increase our competitiveness towards the other ever growing numbers of professional training institutions, we need an information system that will increase the rate of work and also the global efficiency of the academy.

About the Systems Development Life Cycle

Systems Development Life Cycle (SDLC) is any logical process used by a systems analyst to develop an information system, including requirements, validation, training, and user ownership. An SDLC should result in a high quality system that meets or exceeds customer expectations, reaches completion within time and cost estimates, works effectively and efficiently in the current and planned Information Technology infrastructure, and is inexpensive to maintain and cost-effective to enhance

Computer systems have become more complex and often (especially with the advent of Service-Oriented Architecture) link multiple traditional systems potentially supplied by different software vendors. To manage this level of complexity, a number of system development life cycle (SDLC) models have been created: "waterfall," "fountain," "spiral," "build and fix," "rapid prototyping," "incremental," and "synchronize and stabilize." Although the term SDLC can refer to various models, it typically denotes a waterfall methodology.

We at the Constance Hospitality Academy will use the normal and more common waterfall methodology, to implement a new information system to solve the problem and needs of the Academy

PHASE 1:

1. Identification of needs and problems in the company(CHA) which can be solved with the implementation of an information system

1.1 Needs and problems

In this step, problems and needs arising at CHA will be identified and described in details.

Here are the following needs:

No 1: Student Enrolment

When student are enrolled at CHA, they need to fill in the application form with their name, photograph, telephone number, age, education achieved, course applied, signature, and responsible party(if any). As part of the application process, they also need to buy the polo shirt of CHA (which is the official uniform of CHA), and make their entry payment to the assistant training coordinator.

The above is a very long process and also a very tiring one, both for the applicant and the staff of CHA.

No 2: Payment of courses by the students.

Students need to pay their tuition fees every month to follow courses at the academy. This is done with the students paying the assistant training coordinator who in turn complete the transaction with the account department of CHSL. This procedure is very time consuming.

No 3: Logging of non teaching staff into presence book.

Every day, the non teaching staffs need to mark their presence in a log book. With this information, their monthly salary will be calculated by then logging all the data into the account database of CHSL and then formulating their salary.

No 4: Keeping a history of the things entering and leaving the store of CHA.

All the stationery, food (mainly breakfast and tea time items) and uniforms of the academy are kept at the store. However no neat records of outgoing or ingoing things are kept. This may in the long term become a very big problem.

No 5: Printing copies of all the theoretical work of particular course needed by a student when a student is enrolled for that particular course

When a student is enrolled for a particular course, the trainer of that course needs to do photocopies of theoretical work to provide to the student himself/herself hence losing precious time that could have been used for more important purposes.

No 6: Planning of academic calendar

Actual planning of academic calendar is done by consulting each trainer and then establishing a calendar which is sometimes not final and complete.

No7: Parents have many times phoned at the academy to ask the trainers about the progress of their ward

Parents do not know the progress of wards that remains evasive about their doings at the academy. All that the parents have is the carnets de stage that trainers fill to record the progress of their students.

No 8: Students attendance is sometimes taken individually by the trainers at the start of each session

The overall students' attendance is not centralized, and if a problem arises concerning attendance, the managers and parents do not have the facilities to consult the IS for infor

No 9: Examinations are organized by the trainers and is not centralized.

Examinations of the student are organized by each trainers individually and are not related or planned according to a given period.

2. Solutions for the problems and needs are proposed as a concept.

Solution for problem No 1:

A database would be created to store all the information about the students who are enrolled. These information would be easily used and retrieved on any computer (they will be in network with each other) when someone is in need of it.

Solution for problem No 2:

A database will be created to store all the payments made on a monthly basis by the students. Records of these payments will be available on the database for every one to review and for the accounting department of CHSL to make the yearly report on income of CHA.

Solution for problem No3:

Non teaching staff could enter their presence directly on a database where the account department could then calculate their salary. Also the manger could access to the database to see who is absenting too much and then make recommendations.

Solution for problem No4:

Creating a database of all the things present in the store and also could add or delete things on this database as things enters or leave the store.

Solution for problem No5

When a student will be enrolled and his name entered into the database, the software will automatically detect the course being followed and then order a print on the library printer where someone from the non-teaching staff could fetch it and then give it to the respective teacher who will then distribute it to the student enrolled.

Solution for problem No 6:

Creation of an online academic calendar which will be affiliated to the information system, where trainers will be able to modify their planning whenever they want and all persons concerned will be notified automatically by the system.

Solution for problem No 7

Creation of an online database student progress platform where parents will be able to view the progress of their ward and have a proper interaction with the trainers.

Solution for problem No 8

Creation of an online attendance platform where all the attendance (both practical training and theory at academy attendance) will be stored on a database and thus anyone concerned (even parents will have access to the attendance of their ward.

Solution for problem No9

Examination timetables, seating arrangements, registration for admission into examination, examination candidates list would be available as modifiable reports (to those concerned specially) on demand by the Information System.

3. Business Requirements

3.1 Business objectives of the concept

1. Reduce time taken to enroll student by 50%
2. Time to retrieve information about students should be reduced by 75%
3. Reducing the cost of going to the CHSL at Belle mare for payment of students at the end of each month for the driver of the company.
4. Reducing amount of stationery used by 50% when enrolling students and hence cost.
5. Reducing wastage of time used for photocopying theoretical work and also reducing excess printing that usually occurs when there is errors in estimating numbers of copies needed.

3.2 Business risks

1. The employers of the academy might require that their contract be renegotiated to reflect the new employers role and the learning of the IT program may require a salary increase for them.
2. As nearly all the operation of the CHA would then depend on the use sole of computers and of intranet, the smallest power cut, breakdown in the information system or failure of the intranet network could result in total stop in the flow of work of CHA.

Phase 2:

4. Defining the vision and scope or boundary of the concept which is being proposed

4.1 Vision Statement

When a student is enrolled by the academy, all information of the student are directly entered into a program and stored directly into a database. Printed copies of theoretical work are offered to the students only some minutes after their enrollment (i.e.: entry into the database). When the students make their monthly payment, the assistant training coordinator need only to collect the cash and then input a small 'y' into the column 'Payment Done' into the database. When the non teaching staff arrives in the morning, the secretary needs only to input a small 'p' in the presence column into the database on seeing them. The database concerning the store would be updated by the storekeeper each time an item enters or leaves the store. Hence there will be no need to search the store or phone CHSL to see if something is available. The storekeeper will only need to check his database where all items will be listed.

4.2 Limitations and Exclusion

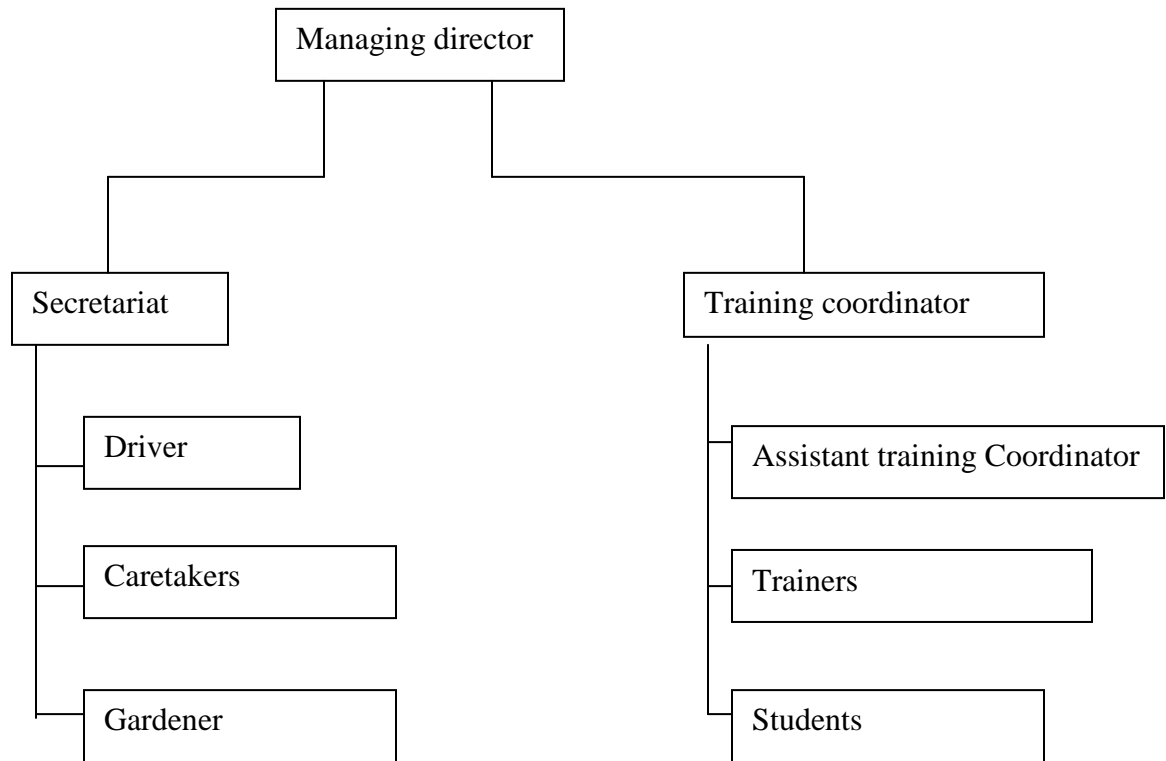
1. Calculation of overall cost and also salary of non teaching staff would not be possible as all the accounts of the academy are done at the CHSL.

4.3 Business context

Stakeholder Profiles

Stakeholder	Major Value	Attitudes	Major Interests	Constraints
Corporate Management	improved employee productivity; cost savings for CHA	strong commitment	cost savings must exceed development and usage costs	None identified
General manager	more efficient use of staff time throughout the day; higher customer satisfaction	concern about staff worries but happy to make	job preservation	Training for staff in Internet usage and software usage needed
Trainers	More efficient use of time.	strong enthusiasm, but might not use it as much as expected	simplicity of use. More time for them to relax.	None identified
Secretary and Assistant training coordinator	no benefit; needs to learn about the software. It can somehow save their	not happy about the software work needed, but recognizes the value to the company and employees	Less need for physical movement inside the several department of the CHA.	No resources yet committed to make software changes
Non teaching staff	No great benefit. No need to input their presence by themselves	receptive but cautious	More organization for their work.	Might need to follow intensive course to handle software

4.4 Company Organization



5. Feasibility Study

5.1 Project management plan

Estimated time frame for the project

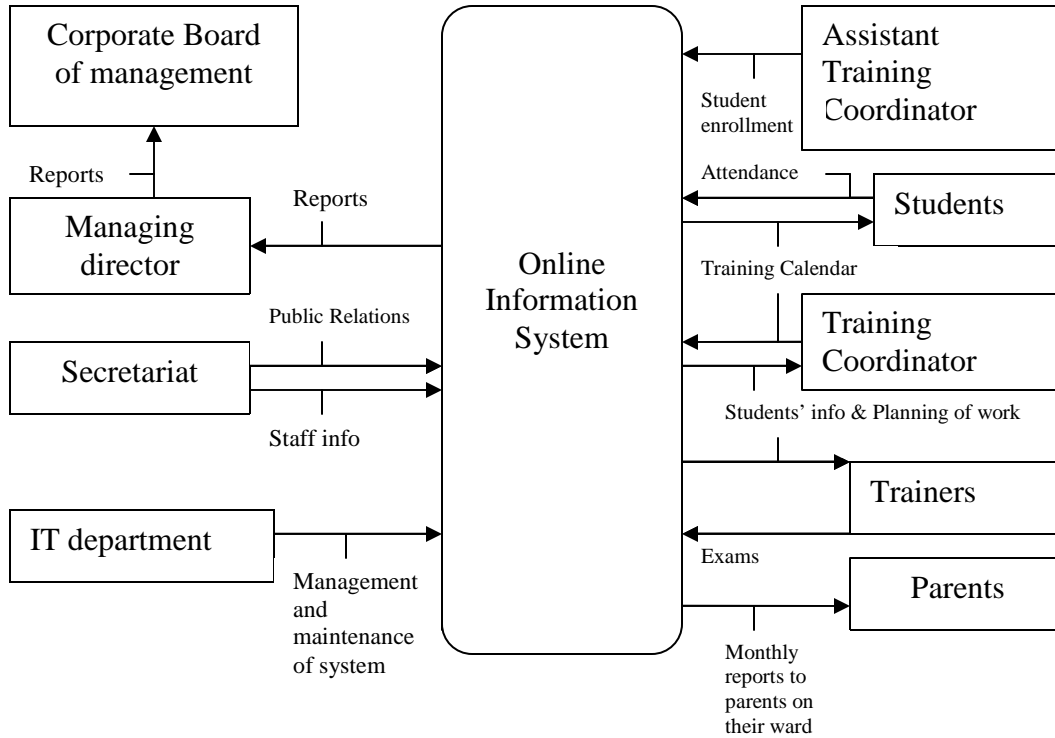
Task	Date to be started	Date to be completed
Implementation of IS		
Design of IS		
Creation of algorithms		
Testing		
Conclusions		

5.2 Budget for Creation of Information System

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Planning of implementation of the Information System

Data flow diagram



Use cases for the information system

Use Case ID:	1
Use Case Name:	Student enrollment
Created By:	Stephane
Date Created:	27.02.2009
Actors:	Assistant Training Coordinator, Prospective Student
Description:	A prospective student which has already received approval to follow a course from the trainers and G.M, enters the assistant training coordinator office and need to be registered into the course
Preconditions:	1. Assistant Training Coordinator is logged into IS.
Postconditions:	1. Prospective student is enrolled 2. Printed copies of theoretical work is done 3. Student receives uniform and Timetables for their course
Normal Flow:	<p>1.0 Enrolling a student</p> <ol style="list-style-type: none"> 1. Assistant Training Coordinator check if there is still seats available for the course 2. If seats are available, ATC starts to input information about student in the IS. 3. ATC indicates that all information are already input and information are logged into a database 4. System displays all information on the student on the screen. 5. ATC confirms information or request to modify the information 6. System order printing of copies of theoretical work, printing of timetable for desired course and also system send a message automatically to the store keeper to deliver a uniform kit to the newly admitted student. 7. .System asks for payment method 8. ATC asks the student the means by which he/she will make the payment and then specifies it into the system 9. System confirms method of payment and notifies the Accounts department. 10. If Accounts Department confirms payment, student enrollment is confirmed.
Alternative Flows:	<ol style="list-style-type: none"> 1. 1.1 Payment confirmation If payment is not approved by accounts department, system notifies the ATC that payment is not correct, the system is redirected to step 7
Frequency of Use:	Approximately 7 user, average of 2 usage per day
Assumptions:	1. The student must be of age
Notes and Issues:	1. The default date is the current date if the ATC is using the system.

Use Case ID:	2
Use Case Name:	Store
Created By:	Stephane Catherine
Date Created:	18 March 18, 2009
Actors:	Storekeeper, Anyone who ask to get something from the store
Description:	Someone ask the storekeeper to retrieve something from the store,
Preconditions:	Storekeeper is logged into IS
Normal Flow:	<p>5.0 Register for Payroll Deduction</p> <ol style="list-style-type: none"> 1. Storekeeper request to register to remove items in the system. 2. System invokes Authenticate User's Identity use case. 3. System denotes if user rank is eligible to remove items from store. 4. System confirms that items are available... 5. System remove item from item list database. 6. Storekeeper is allowed to remove item from store and give it to the user who had asked for it 7. System includes this in the report to be finalized monthly to the Accounts department..
Exceptions:	<p>5.0.E.1 Storekeeper identity authentication fails (at step 2)</p> <ol style="list-style-type: none"> 1. System gives user two more opportunities for correct identity authentication. 2a. If authentication is successful, storekeeper proceeds with use case. 2b. If authentication fails after three tries, System notifies user, logs invalid authentication attempt, and terminates use case. <p>5.0.E.2 User is not eligible for payroll deduction (at step 4)</p> <ol style="list-style-type: none"> 1. System informs Patron that he is not eligible for payroll deduction and gives the reason why. 2. System terminates use case. <p>5.0.E.3 Storekeeper is already enrolled for payroll deduction (at step 4)</p> <ol style="list-style-type: none"> 1. System informs storekeeper that he is already registered for payroll deduction. 2. System terminates use case.
Includes:	Authenticate User's Identity
Priority:	High
Frequency of Use:	Thrice per employee on average (by day)

Requirement Analysis

Analysis of user needs

Development of user requirements

Functional Requirement Document

Conclusion for the first four Phase