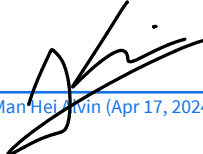The content of this report has been read by placement work supervisor prior to submission to the City University of Hong Kong.

PLACEMENT STUDENT	CHOW Man Hei Alvin	SIGNATURE	CHOW Man Hei Alvin (Apr 17, 2024 10:50 GMT+8)
WORK SUPERVISOR	Mr. KWONG Sze Yat, Antho	SIGNATURE	

COMPLETE AND INSERT THIS FORM AS "PAGE 1" OF YOUR FINAL PLACEMENT REPORT.

Final Placement Report

II. Acknowledgement

I would like to express my sincere gratitude to my university for providing me with the opportunity to undergo my professional placement. I am also thankful to St Teresa's Hospital and the Information Technology Service Department for accepting me as a placement student and for their support and guidance throughout this placement period.

III. Objectives of Placement

The primary objectives of my placement are to:
- Gain practical experience in the field of computer science
- Apply the knowledge acquired during my degree program
- Develop a deeper understanding of the role of IT in a healthcare setting
- Enhance my technical and professional skills
- Improve communication and collaboration abilities
- Identify areas for personal and professional growth

IV. Description of Company

St Teresa's Hospital is a renowned healthcare institution dedicated to providing quality medical services. The hospital focuses on delivering exceptional patient care and leverages technology to enhance operational efficiency. With a commitment to innovation, St Teresa's Hospital strives to integrate advanced IT solutions into its services. The hospital employs a large staff of medical professionals, administrative staff, and IT specialists to support its operations.

V. Description of Department

During my placement, I have been assigned to the Information Technology Service Department, specifically the Application Team. This department plays a crucial role in developing and maintaining various software applications used within the hospital. The team consists of skilled professionals who collaborate to ensure the effective implementation and utilization of IT systems.

VI. Work Assignments

Throughout my placement, I have been assigned various tasks by a senior team member in the Information Technology Service Department. I am pleased to mention that I completed these tasks well ahead of the assigned deadlines. The major tasks included:

1. Lab Report Inquiry & Export as PDF/Excel Enhancement
    Developed a feature to allow users to inquire about lab reports and export them as PDF or Excel files. This enhancement improves the accessibility and usability of lab reports for healthcare professionals.

2. Referral Order Form
    Created a form to streamline the process of generating referral orders for patients. This form ensures accurate and efficient communication between healthcare providers and specialists.

3. User Maintenance Screen Enhancement
    Enhanced the user maintenance screen to improve the management and administration of user accounts within the hospital's system. This enhancement simplifies user account management and ensures data security.

4. Patient Search Screen Enhancement
    Improved the patient search screen functionality by implementing advanced search filters and optimizing search algorithms. This enhancement enables healthcare professionals to quickly retrieve patient information and enhances patient care.

5. Hotkey function for Registration Note
    Implemented a hotkey function that allows healthcare professionals to quickly add registration notes during patient registration. This feature improves efficiency and documentation accuracy.

6. Patient Visit Inquiry
    Developed a feature to enable users to retrieve information about a patient's previous visits and medical history. This enhancement facilitates comprehensive patient care and enhances the continuity of treatment.

7. Patient & Visit Log Enhancement
    Improved the recording and tracking of patient information and visit details in the hospital's system. This enhancement ensures accurate and up-to-date

patient records, enabling better coordination of care among healthcare professionals.

8. Lab Order Inquiry
   Developed a feature to allow users to retrieve information about lab orders and test results. This enhancement provides healthcare professionals with quick access to critical diagnostic information, aiding in timely treatment decisions.

9. Microbiology Organism Package Setting
   Created a user interface to manage microbiology organism packages, allowing administrators to configure and update the packages used for microbiology testing. This enhancement ensures the availability of up-to-date and accurate testing options.

10. Email Notification for wrong input of security code
    Implemented an email notification system to alert users when an incorrect security code is entered multiple times during login attempts. This enhancement improves the security of the hospital's system and safeguards sensitive patient data.

11. Radiology Information System Report Received Queue
    A temporary program replacement for a down service from a vendor, so that the system could still have its original function maintained at service level. This task could buy time before the new system is settled at full development.

12. Lab Order/Test Cancelling Reason & Cancel Log
    A function that requires the users to input reason before canceling a lab order/test, and store the records with corresponding reasons, order/test, time, etc. to the database. Also, develop a new page for users to inquire about cancel history from a cancel logistics page.

13. Referral Order Test Logistic & Referral Log
    Digitalizing the original handbook of referral lab records/authorizations into the Lab System web application. Create a new table for the database and write an API for it to communicate with the front-end web application.

VII. Analysis of CILO

The work assignments I completed during my placement align with the Course Intended Learning Outcomes (CILOs). Here is how they meet the CILOs:

Student Name: CHOW Man Hei Alvin
SID: 57145722

CILO	Analysis
1	The completion of tasks such as lab report inquiry enhancement, referral order form, and email notification for wrong input of security code required effective communication skills. These tasks involved gathering requirements from different stakeholders (such as healthcare professionals) and ensuring clear and concise communication to meet their needs.
2	Throughout the placement, I observed the operations of the Information Technology Service Department at St Teresa's Hospital and gained an understanding of the role and functioning of IT in a healthcare organization. This experience allowed me to discover and adhere to the industry's best practices and standards.
3	By successfully completing the tasks mentioned, such as user maintenance screen enhancement, patient search screen enhancement, and patient visit inquiry, I demonstrated competence in applying technical skills and knowledge acquired during the program to solve IT-related challenges in a real-world setting.
4	Throughout the placement, I effectively managed my time, met deadlines, and worked independently to complete the assigned tasks. I demonstrated professionalism by adhering to the hospital's policies and maintaining confidentiality when handling patient data.
5	Collaboration was essential during my placement, as I worked with team members, including senior developers and stakeholders, to gather requirements, seek feedback, and ensure the successful implementation of the assigned tasks. This collaboration involved effective communication, active listening, and the ability to work well within a team setting.
6	Throughout the placement, I independently investigated and proposed solutions for various IT-related problems. This included analyzing user requirements, researching best practices, and designing effective solutions to enhance the hospital's system and improve patient care.

VIII. Analysis on Programme

The work assignments I have completed ahead of schedule during my placement highlight the applicability and relevance of the computer science degree program. The efficient completion of tasks demonstrates the problem-solving techniques I have gained through the program. It reinforces the importance of a comprehensive education that combines theoretical concepts with practical application.

IX. Experience Gained

Completing the work assignments ahead of schedule has provided me with various experiences and learnings. Technically, I have further honed my programming skills, particularly in areas such as Angular, Node.js, SQL, and VB.NET. Through the guidance and support of the senior team members, I have been able to apply these skills effectively and efficiently.

The early completion of tasks has also enhanced my problem-solving abilities. I have encountered challenges during the development process, and by completing the assignments ahead of schedule, I have showcased my ability to analyze complex problems and find effective solutions.

Furthermore, the experience of working within the Information Technology Service Department has allowed me to develop a strong sense of professionalism. Meeting deadlines well in advance demonstrates my commitment to delivering high-quality work and showcases my ability to manage tasks effectively.

X. Self-reflection

Completing the work assignments well ahead of schedule has provided me with the opportunity to reflect on my work habits and abilities. It has shown me that I possess strong time management skills and the ability to prioritize tasks effectively. By completing the assignments early, I have also demonstrated self-motivation and a proactive approach to work.

Moreover, this experience has allowed me to understand the importance of setting realistic goals and working diligently to achieve them. I have learned to break down complex tasks into smaller, manageable components, which has contributed to my overall efficiency.

Additionally, completing the tasks ahead of schedule has given me a sense of

accomplishment and boosted my confidence in my abilities. It has reinforced the value of hard work, dedication, and continuous improvement in achieving success in the professional world.

XI. Appendix

activitylog.2023-0
8-2024-04.pdf

Department of Computer Science
City University of Hong Kong
Placement Activity Logs

_____

Student Name   :   CHOW Man Hei Alvin

Student Number   :   57145722

Company Name   :   St. Teresa's Hospital

Department Name   :   Information Technology Services Depa

The attached activity logs for the following period have been read and agreed:

 1 August 2023 - 30 April 2024

Work Supervisor's Name :   Mr. KWONG Sze Yat, Anthony
_____

Work Supervisor's Signature: _____   Date: _____   Apr 17, 2024

Academic Supervisor's Name :   Prof. LIU Chen
_____

Academic Supervisor's Signature: _____   Date: _____   Apr 18, 2024

Chen Liu
Chen Liu (Apr 18, 2024 14:22 GMT+8)

Department of Computer Science
City University of Hong Kong
<u>Placement Activity Logs</u>

Student Number : 57145722
Student Name   : CHOW Man Hei Alvin
Company Name : St. Teresa's Hospital
Department Name : Information Technology Services Department

The attached activity logs for the following period have been read and agreed :

1/8/2023 - 30/4/2024

Work Supervisor Signature: _____ Date: _____
Work Supervisor (Post Title): Mr. KWONG Sze Yat, Anthony (System Analyst)

Academic Supervisor Signature: _____ Date: _____
Academic Supervisor (Post Title): Prof. LIU Chen (_____)

> 1/8/2023 - 31/8/2023

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	7/8/2023	8.0	System Study & Design	C	Studying the hospital's Lab Information System and the Angular frontend framework	2,6
2	16/8/2023	7.0	Program Development	C	Studied the project code and developed a log page for searching information from the database in both WEB and API	4,6
3	29/8/2023	3.0	Program Development	C	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (7 Tasks on the list)	4,6

> 1/9/2023 - 30/9/2023

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	1/9/2023	6.0	Program Development	C	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (3 Tasks left on the list)	4,6
2	4/9/2023	1.0	Meeting	C	Reported my monthly progress in August in a monthly meeting	1
3	11/9/2023	4.0	Program Development	C	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (4 new Tasks on the list)	4,6
4	14/9/2023	1.0	Program Development	C	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (2 new Tasks on the list)	4,6
5	18/9/2023	2.0	Program Development	C	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (Another 2 new Tasks on the list)	4,6

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
6	20/9/2023	6.0	Program Development	C	Develop a web app for creating/searching/modifying specific information to/from the database with different relationships among entities in both WEB and API, which also provides user-friendly functions on frontend web like input validation/input search list etc.	3,4

> 1/10/2023 - 31/10/2023

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	3/10/2023	9.0	Program Development	C	Develop a web app for creating/searching/modifying specific information to/from the database with different relationships among entities in both WEB and API, which also provides user-friendly functions on frontend web like input validation/input search list etc.	3,4
2	4/10/2023	1.0	Meeting	C	Reported my monthly progress in August in a monthly meeting	1
3	10/10/2023	1.0	System Study & Design	C	Found that the API process controlled by PM2 has to be reloaded and built again, in order to run the latest code version.	6
4	18/10/2023	5.0	Program Development	C	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (10 new Tasks on the list)	3,6
5	26/10/2023	1.0	Software Maintenance	C	Fixed bugs occurred in previous tasks, and enhanced some code practice.	2,6
6	30/10/2023	2.0	Database	C	Writing a sql script using store procedure for optimizing data searching speed on large table.	3,6

> 1/11/2023 - 30/11/2023

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	1/11/2023	1.0	Meeting	C	Monthly Report	1

2	1/11/2023	5.0	Database	*C*	Writing a sql script using store procedure for optimizing data searching speed on large table.	3,6
3	9/11/2023	3.0	Program Development	*C*	Developing a new setting page etc. of the Lab Information System. (2 new Tasks on the list)	3,4
4	15/11/2023	4.0	Program Development	*C*	Develop an inquiry page implementing the searching logic of the previous store procedure SQL	3,4
5	22/11/2023	1.0	Database	*C*	Add Function Code for permission verification etc. to some pages I developed	4
6	23/11/2023	4.0	Program Development	*C*	Write a web service to trigger email sending function and call it when some situation happens from api.	2,3

> 1/12/2023 - 31/12/2023

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	4/12/2023	1.0	Meeting	*C*	Monthly Report	1
2	4/12/2023	3.0	Program Development	*C*	Write a web service to trigger email sending function and call it when some situation happens from api.	2,3
3	11/12/2023	4.0	Meeting	*C*	Discussing about the new coming major project with the senior team member. (Project: Digitalizing the original handbook of referral lab record/authorizations into the Lab System web application)	1,2
4	18/12/2023	6.0	Program Development	*C*	Digitalizing the original handbook of referral lab record/authorizations into the Lab System web application (info: Create a new table to database and write an api for it to communicate with front end web application) [Initial version, pending for user opinion]	2,5

> 1/1/2024 - 31/1/2024

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	2/1/2024	3.0	Program Development	*C*	Updated some requirements on the last task (Referral Order) & Improve some flaws in past tasks.	3,6
2	8/1/2024	1.0	Meeting	*C*	Monthly Report	1
3	9/1/2024	7.0	Program Development	*C*	Use VB.net to create a program that transfers PDFs in a shared folder to another location and inserts the information of the PDF info into the database queue. After processing the data, the item will be transfer to another queue and the pdf will be transfer to the other folder.	2,5
4	22/1/2024	7.0	Program Development	*C*	Digitalizing the original handbook of referral lab record/authorizations into the Lab System web application (info: Create a new table to database and write an api for it to communicate with front end web application) [Developing based on user feedbacks & requirements]	2,5
5	29/1/2024	3.0	Program Development	*C*	Enhanced the digitalized referral handbook page & made some information only viewable by users with permission.	4,6

> 1/2/2024 - 29/2/2024

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	1/2/2024	1.0	Program Development	*C*	Update Referral Label Format and conditional display element	4,6
2	1/2/2024	1.0	Documentation	*C*	Preparing PowerPoint for monthly report and figured out the background and the systems running behind the work tasks.	1
3	5/2/2024	1.0	Meeting	*C*	Monthly Report	1
4	6/2/2024	3.0	Program Development	*C*	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (8 new Tasks on the list)	4,6

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
5	19/2/2024	3.0	Program Development	*C*	Developing the Lab Information System to meet some of the users' feedback and enhance their user experience. (4 new Tasks on the list)	4,6
6	22/2/2024	4.0	Documentation	*C*	Preparing PowerPoint for monthly report	2

> 1/3/2024 - 31/3/2024

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	4/3/2024	1.0	Meeting	*C*	Monthly Report	1
2	5/3/2024	3.0	Program Development	*C*	Lab System's Referral Order Log Screen	4,6
3	11/3/2024	1.0	Program Development	*C*	Lab System's Referral Order page hotkey input system for remark comments	2,6
4	12/3/2024	3.0	Program Development	*C*	Add Hot Key function for remarks for Referral Order Page	4,6
5	18/3/2024	8.0	Software/System Testing	*C*	Revisiting Lab System to check possible bugs in past applied functions	2

> 1/4/2024 - 30/4/2024

No.	Start Date	Man-days	Type of Work	Status	Task Description	CILO
1	2/4/2024	3.0	Software/System Testing	*C*	Revisiting Lab System to check possible bugs in past applied functions	2
2	8/4/2024	4.0	Program Development	*C*	Referral Order.Page Development (implementing new requirements)	3,4
3	9/4/2024	1.0	Meeting	*C*	Accompany senior to meet with lab users and lab manager, discuss the design of my referral order page	1,2
4	15/4/2024	3.0	Program Development	*C*	Referral Order Page Development (implementing new requirement from newly received email)	2,4