AUT UNIVERSITY
NEW ZEALAND

COMP704 Research and Development Project

VN01 3D acupuncture healthcare data management and treatment system

Project Handover

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Team Members:

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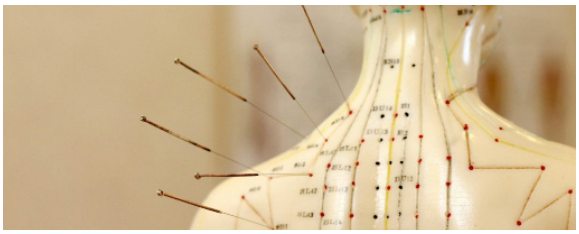

Version: 1.0

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DOCUMENT VERSION CONTROL

1. DOCUMENT INFORMATION

Document code	**PH**
Document title	**Project Handover Document**
Version	**1.0**
Authors	**Nhan Nguyen Cao, Chuong Pham Dinh**
Distributed by	**Project VN01 team**
File name	**PH_Project Handover Document_1.0.pdf**
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2. DOCUMENT SIGN-OFF

ID	Member	Role	Signature	Timestamp
21142355	Tan Le Tran Ba	Project Manager		12 May 2023 20:25

3. DOCUMENT VERSIONS

Version	Timestamp	Description	Responsible members
1.0	11 May 2023 00:10	Required information and suggestions for referencing the basic information for handover the project.	**Nhan Nguyen Cao** *(21142377)* **Chuong Pham Dinh** *(21142358)*

I. PROJECT SCOPE & REQUIREMENTS ALIGNMENT

Compared to the originally planned scope and features for the project, the following table summarize the alignment to the final status of the project that has been done by the core team until the conclusion of the Project:

Table 1 - Project Scope Alignment

Project In-Scope Items	Alignment	Proof of Achievement
A research about the experiments of applying advanced technologies into the field of acupuncture treatment.	**Achieved**	Team acquired a basic understanding from specialists about Acupuncture and being able to apply advanced technology (in specific, 3D rendering technique) to promote a Technology solution supporting exploration about Acupuncture through visuals and interactions.
Collection of domain knowledge data about Acupuncture points and Meridians, in both Vietnamese and English, from medically trusted books and presentation slides, provided and suggested by the acupuncturists.	**Achieved**	Team acquired a verified database of domain knowledge about Acupuncture in both languages, collected from trusted medical resources. The database contributed to a system for searching basic information about Acupuncture points and Meridians.
A 3-D interactive human body with 362 acupuncture points and 14 meridians (12 main meridians and 2 extraordinary meridians).	**Achieved**	Team was able to integrate a 3D human body model with 362 Acupuncture points and 14 Meridians positioned at appreciated locations.
An Acupuncture Domain knowledge Search system, allowing searching about basic information of 362 acupuncture points and 14 meridians.	**Achieved**	A search system with trusted medical domain knowledge data about Acupuncture points and Meridians was delivered in the final product.
Quiz and Personal Learning Progress feature to support Medical University Students (main users of the project) with their learning progress about Acupuncture using the system.	**Achieved**	Support features supporting the student with the learning progress through interactions with the 3D model and through the quizzes within the system were also delivered in the final product.

The alignment of the requirements (including both functional and non-functional requirements) of the project compared to the proposed list of features is as follows:

Table 2 - Project requirements alignment

Requirements	Alignment	Details
The system should provide all users with basic authentication features, including: Sign up, Log in, Reset password and Edit profile.	**Achieved**	
The system should allow users to view the 3-D model of human body.	**Achieved**	
The system should allow users to interact with the 3-D model with some basic options like spin, zoom-in, and zoom-out of the view space.	**Achieved**	
The system should allow users to view the 12 standard meridians and 2 extraordinary meridians (Ren Meridian and Du Meridian) on the 3-D model of human body.	**Achieved**	
The system should allow users to view the acupuncture points marked on the meridians on the 3-D model of human body.	**Achieved**	
The system should allow users to view the information about the meridians by clicking on them on the 3-D model of human body.	**Achieved**	
The system should allow users to view the information about the meridians by clicking on them on the 3-D model of human body.	**Achieved**	
The system should allow administrators and authorized users to manage and insert, update the information of acupuncture points and meridians with a dashboard.	**Achieved**	
The system should allow users classified as students to attempt quizzes on the acupuncture points and meridians.	**Achieved**	
The system should store the results of quizzes attempted by the users and display the personal records using statistics and charts, graphs about the historical learning progress.	**Achieved**	
The system should allow users to switch between the view mode of two different types of 3-D model for human body: external anatomy model and internal anatomy model	**Not Achieved**	Eliminated due to the not able to acquire an internal anatomy 3D model, mostly due to lack of budget.
The system should be able to provide a user interface viewport for both desktop devices and mobile devices, allowing users to be	**Achieved**	

able to access and use the system from different groups of devices.		
The system should be able to render the 3-D model in no more than 30 seconds, from the time the rendering request is made by the user.	**Achieved**	
The system should be able to handle the requests for inputting data from the system or retrieving information within the system in no more than 5 seconds.	**Achieved**	
The system should be available for access for no less than 23 hours each day.	**Achieved**	
The system should be compatible with the newest versions of all common browsers, such as Google Chrome, Mozilla Firefox, Opera, Microsoft Edge, etc.	**Not Fully Achieved**	Still observed some UI bugs for Safari browser on MacOS.
The system should be able to handle the features without consuming up to more than 1GB of RAM from the browser.	**Not Fully Achieved**	Depends on the type of browser. For some specific browsers, it can take a little bit more than 1GB of RAM during the interactions with the 3D model.

It can be observed that the final deliverable of the project did cover many of the initial scope and list of features. However, there were still some items not achieved or not fully achieved, meaning that there are still points to improve for the project in the future.

II. PROJECT HANDOVER – TECHNICAL ACCESS

For project handover, a different document about Technical Specification would also be included, detailing code structure and credentials manager to access different parts of the project.

In summary, those are some bases of code that would be handed over to the next team owning this project:

Table 3 - Code repositories and access links

Repositories	URL	Details
rnd-vn01-fe	Link	Front-end code base of the product, initialized as a React.js project.
rnd-vn01-be	Link	Back-end code base of the product, initialized as a NestJS project.
rnd-vn01-data-integration	Link	Repositories storing the notebooks used during Data Integration phase.

The information for logging in into accounts that are able to access the code base and set up or modify the CI/CD flow on CircleCI was provided in the Technical Specification document.

Manual: To set up Admin account for using the Authorized features of the final system, perform the following steps:

- Create an account using the email for Administrators or Authorized Stakeholders.
- Manually set "Admin" roles for the corresponding account in "Users" collection of the project's MongoDB database.
- Go to the Front-end code base, under `src/configs/constants.ts`, add the email of the account into the array `ADMIN_EMAILS`.
- The newly registered accounts would now have the rights to use the Admin-only features.

III. PROJECT HANDOVER – DOCUMENTATION

Many projects would be handed over to the new team after the core team summing up the project, to provide with enough information to continue the project after handing over. A list of some important documents for Project Handover step includes:

Table 4 - Project Handed-over documents

Document code	Document name	Details
PO	Project Overview	Basic information about the background, description, scope of the Project.
TS	Technical Specification	Detail the technical specification, settings, environments set up steps and many more technical specifications required for the project.
PP	Project Proposal	The initial document used to propose the Client with the current final product and got approved.
TFR	Tool Feasibility Research Report	A summary of the research about the feasibility of some selected tools in fulfilling the features of the project.
PC	Project Charter	A document used mainly by the Project Manager to understand about different concepts within the project

		and approve for starting whenever possible.
GC	Gantt Chart	To illustrate the full 8-month journey of the project.
WBS	Work Breakdown Structure	Details about the planned tasks distribution following the Gantt Chart of the project.
ScS	Project Scope Statement	Defining about the scope of the project, especially what are in-scope and what are out-of-scope (not implement for this project).
MRR	Market Research Report	The report of the researches on some tools serving quite similar features on the market. The results of Market Research phase contributed greatly to the proposing list of items for the project.
PR	Project Requirements	Details about the requirements for the project through different versions, both functional and non-function requirements.
PrT	Prototype	Document all the layouts and basic description or explanation about the layout, for all epics of the final product.
UM	User Manual	A guide to use the basic features of the final product for the users.
CL	Change Log	A log of changes and updates for each major epic of the project.
DIP	Data Integration Process	A documentation about the plan, goals and final results used during the Data Integration step before Development phase.
PH	Project Handover	Details the basic and fundamental information for hand-overing the project to other teams.
TP	Test Plan	Details about the plan for performing different forms of test cases, on different platforms and devices.

TechTR	Technical Testing Results Report	A summary of the testing results for the methods involving the technical team.
ManuTR	Manual Testing Results Report	A summary of the testing results for the methods involving the Quality Engineer team.

IV. PROJECT FUTURE DEVELOPMENT PLAN

Despite the project achieved more than 80% of the original plan, there were still many things to be considered in continuing to maintain the development for the project. Some of our team's suggested list of things to consider for Future Development of the project include:

- **Integrate the 3D internal anatomy view mode for the model**: This will surely be one of the key developments for the project.
- **Scalable to a larger community of TCM students**: Despite the current version of the system was only decided and developed to serve 5 end-users, it would be a great idea to keep all the values of the product and spread it to a wider community of Traditional Chinese Medicine users.
- **Improve UI, interactions bug**: Especially to fix the UI bugs happened with Safari browser on MacOS environment, and the laggy situations on some devices while rendering out the 3D model on the browser.

V. PROJECT CORE TEAM CONTACT DETAILS

If more information is needed by the hand-over team for the project, feel free to contact the core team to ask for further support and explanations in taking over, enhancing or adding new features to the final product:

Table 5 - Team contact information

ID	Full name	Role	Phone number	Email
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21142377	**Nhan Nguyen Cao**	Business Analyst & Front-end Developer	+84 704 448 681	mmr6179@autuni.ac.nz
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