COMP704 Research and Development Project

VN01 **3D acupuncture healthcare data management and treatment system**

Work Breakdown Structure

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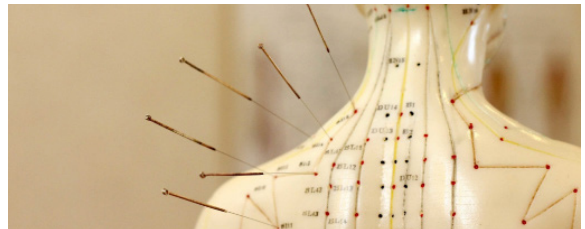   21142358   Trang Ho Ngoc Thao

Version: 2.0

Date: 20th April 2023

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DOCUMENT VERSION CONTROL

1. DOCUMENT INFORMATION

Document code	**WBS**
Document title	**Work Breakdown Structure**
Version	**2.0**
Authors	**Nhan Nguyen Cao**
Distributed by	**Project VN01 team**
File name	**WBS_Work Breakdown Structure_2.0.pdf**
Release definition	**Only released as a finished document**

2. DOCUMENT SIGN-OFF

ID	Member	Role	Signature	Timestamp
21142355	Tan Le Tran Ba	Project Manager		20 Apr 2023 10:45

3. DOCUMENT VERSIONS

Version	Timestamp	Description	Responsible members
1.0	22 Oct 2022 16:25	First version of the Work Breakdown Structure, based on the original plan of the project	**Nhan Nguyen Cao** *(21142377)*
2.0	20 Apr 2023 01:25	Updated version of the Work Breakdown Structure, following the updated version of the Gantt Chart	**Nhan Nguyen Cao** *(21142377)*

WORK BREAKDOWN STRUCTURE

Table 1 - Work Breakdown Structure

Task ID	Task	Predecessor	Estimation (man-days)
1	**Proposal**		
1.1	Analyze the requirements for the project	-	5
1.2	Define the milestones and schedule for the project	-	3
1.3	Complete the Project Proposal document	1.1, 1.2	7
1.4	Complete the Project Proposal presentation	1.3	5
	Milestone: Project Proposal presentation		
2	**Research**		
2.1	**Market and technical research**		
2.1.1	Perform technical research for the 3-D model to implement	-	5
2.1.2	Perform market research for similar product	-	5
2.2	**Specialized requirements**		
2.2.1	Interview the acupuncturists to discuss for scope of usage and requirements	-	2
2.2.2	Analyze the requirements + plan for stakeholders	2.2.1	3
2.2.3	Interview with the medical university students to get the requirements	2.2.2	2
2.2.4	Analyze the requirements from the medical students	2.2.3	3
2.2.5	Sum up the final set of functional requirements	2.2.2, 2.2.4	2
2.3	**Sum up the research results**		
2.3.1	Define the work flow for implementation the project from research's results	2.1.1, 2.1.2	3
2.3.2	Explore different choices for platform of the project, that supports rendering 3-D	-	7
2.3.3	Define the framework and libraries to use for the project that support 3-D rendering	2.3.2	3
	Milestone: Report on Research result		
3	**Upskilling and Resources collection**		
3.1	**Upskill technical skills**		
3.1.1	Review and upskill using ReactJS library	-	5

3.1.2	Learn and practice using the ThreeJS library	-	15
3.1.3	Review and upskill using the NestJS framework	-	5
3.1.4	Improve and practice Git skills	-	5
3.2	**Resources collection**		
3.2.1	Collect images for the human anatomy 3-D model	-	5
3.2.2	Collect data about 14 meridians to use from suggested books	-	5
3.2.3	Collect data about the 60 important acupuncture points from books	-	5
3.2.4	Collect data about the 301 supportive acupuncture points from books	-	10
	Milestone: Informal QR Review		
4	**Development (phase 1)**		
4.1	Design the prototype for the final system	-	4
4.2	**Front-end**		
4.2.1	Integrate the interactive 3-D model of human anatomy into the site	3.2.1, 4.1	10
4.2.2	Build acupoints and meridians marking function on the model	3.2.2, 4.1	10
4.2.3	Build the authentication system	4.1	5
4.2	**Back-end**		
4.2.1	Build the authentication server	-	8
4.2.2	Design the structure for database	-	5
4.2.3	Fill up acupoints and meridians for the database	3.2.2	7
4.3	**Testing**		
4.4.1	Test the 3-D human body anatomy model	4.2.1	5
4.4.2	Test the display and information displayed of the acupuncture points and meridians	4.2.2, 4.3.3	5
4.4.3	Test the authentication features	4.2.3	5
4.4.4	Complete the testing document for phase 1	4.4.1, 4.4.2, 4.4.3	5
	Milestone: Midterm Review		
5	**Development (phase 2)**		
5.1	**Front-end**		
5.1.1	Build the search functionality	3.2.2, 4.2.1, 4.2.2	5
5.1.2	Build the dashboard data management system	3.2.2, 3.2.3, 3.2.4	5

5.1.3	Build the quiz functionality	3.2.2, 3.2.3, 3.2.4, 4.2.1, 4.2.2	5
5.1.4	Build the dashboard for learning progress functionality	4.2.1, 4.2.2	10
5.2	**Back-end**		
5.2.1	Build the handling of search by query functionality	3.2.2	5
5.2.2	Build the data management server	3.2.2, 3.2.3, 3.2.4	5
5.2.3	Handle the storage of quiz results and questions	3.2.2, 3.2.3, 3.2.4	5
5.3	**Testing**		
5.3.1	Test the search + data management functionality	5.1.1, 5.1.2, 5.2.1, 5.2.2	10
5.3.2	Test the quiz + personal records system	5.1.3, 5.1.4, 5.2.3	5
5.3.3	Perform automation testing	5.4.1, 5.4.2	5
5.3.4	Perform user testing with the medical university students	5.4.1, 5.4.2	5
5.4	**Deployment**		
5.4.1	Deploy the Front-end side of the system	4.2, 5.1	2
5.4.2	Deploy the Back-end side of the system	4.3, 5.2	3
5.5	**Prepare for Defense**		
5.5.1	Prepare the presentation poster and slide	5.1, 5.2, 5.3	8
5.5.2	Complete the final testing document	5.3.1, 5.3.2, 5.3.3, 5.3.4	8
5.5.3	Layout the Portfolio for submission	5.1, 5.2, 5.3, 5.4, 5.5.1, 5.5.2, 5.5.4	10
5.5.4	Prepare the Status Report document for final submission	5.1, 5.2, 5.3, 5.4, 5.5.1	5
5.5.5	Rehearsal for final Defense presentation	5.5.1	10
	Milestone: Defense Ceremony Presentation		