COMP704 Research and Development Project

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

Work Breakdown Structure
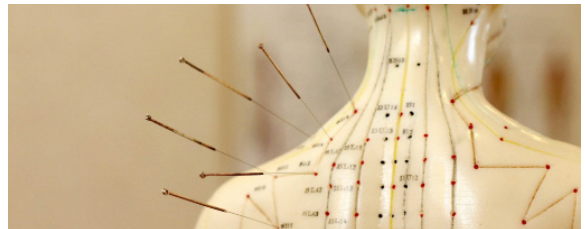
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DOCUMENT VERSION CONTROL

1. DOCUMENT INFORMATION

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3. DOCUMENT VERSIONS

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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)*

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
2	**Research**		
2.1	**Acupuncture**		
2.1.1	Read acupuncture research articles, papers	-	10
2.1.2	Understand the data technique used to optimize the acupoint combinations	-	5
2.1.3	Define the workflow for implementing the project from the research's results	2.1.1, 2.1.2	3
2.2	**3D Model**		
2.2.1	Explore different choices for platforms supporting rendering 3-D	-	7
2.2.2	Define the 3-D rendering framework and libraries to be used for the project	2.2.1	3
3	**Upskilling and Resources collection**		
3.1	**Upskill technical skills**		
3.1.1	Learn and practice using the ReactJS library	-	5
3.1.2	Learn and practice using the ThreeJS library	-	15
3.1.3	Learn and practice using the NestJS framework	-	5
3.1.4	Improve and practice Git skills	-	5
3.2	**Resources collection**		
3.2.1	Find the human anatomy 3-D model	-	5
3.2.2	Collect database about acupuncture points and meridians	-	5
3.2.3	Collect the acupoint combinations from research articles, papers, etc.	-	15
4	**Development (phase 1)**		

4.1	Design the prototype for the final system	-	3
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 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 a database	-	5
4.2.3	Fill up acupoints 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 on the acupuncture points	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
5	**Development (phase 2)**		
5.1	**Front-end**		
5.1.1	Build the meridians management system	3.2.2, 4.2.1, 4.2.2	
5.1.2	Build the acupuncture treatment system	3.2.2, 3.2.3, 4.2.1, 4.2.2	
5.2	**Back-end**		
5.2.1	Build the server and storage for meridians	3.2.2	
5.2.2	Build the recommendation server for acupuncture treatments	3.2.2, 3.2.3	
5.3	**Testing**		
5.3.1	Test the display of meridians and information	5.1.1, 5.2.1	10
5.3.2	Test the acupuncture treatment system	5.1.2, 5.2.2	10
5.3.3	Complete the final testing document	4.4.4, 5.3.1, 5.3.2	8
5.4	**Deployment**		
5.4.1	Deploy the Front-end side of the system	4.2, 5.1	5
5.4.2	Deploy the Back-end side of the system	4.3, 5.2	5
5.4.3	Perform integration testing	5.4.1, 5.4.2	10