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|  | **HASAN KALYONCU UNIVERSITY**  **Computer Engineering Department** **COME 499 Project Proposal Form** |

**Part I. Project Proposer**

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**Part II. Project Information**

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| **Starting Term** | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2 | 0 | 1 | 9 | / | 2 | 0 | 2 | 0 | |
| **Title of the Project** | **PHYSIOTHERAPY WITH VIRTUAL REALITY** |
| **Project Description** | |
| This system is a virtual reality project which provides patients a guidance to perform their exercises. User’s information must be taken and stored in the database. The system won’t be able to diagnose the patient’s health problem. It helps patients to guide their program which is already given from specialist. For example, if a patient has neck pain, s/he will be able to choose neck pain program. This program must have all exercises types (Seated Posture Correction, Shoulder Shrugs etc.) related to neck pain. There must be session part which includes number of days, eligible days, minute of exercises, number of repeating, type of exercises and the period of the program. When the session starts, the patient should complete it. After session is over, user will be able to rate the session, the pain and the mood. For exercises, there must be an animation which shows the exercise in detail before starting. The animation must be exact as recommended by specialist (Speed, angle and order of exercise, etc.). The exercise must last for the selected time and number of repeating. The remaining repeating and time should appear with relaxing music while exercising. When exercise finishes, there should be resting time as well. When the period of program finishes, user should rate to guidance to help improving the system. For better performance, the students may get help from specialist to be more compatible to real life. | |
| **Project Justification** | |
| **Novelty** | |
| **New aspects** | Virtualization of Physiotherapy, creating isolated virtual environment to increase the impact, Guidance to make treatment more efficient. |
| **Complexity** | |
| **Challenging problem and issues** | Convincing user about the system since the technology not been used before and popular. Finding exercises of the disorders. |
| **Related computer science fields and subfields** | Virtual Reality, Physiotherapy, Computer Graphics. |
| **Tools** | Unity, Visual Studio, C# |
| **Risk involved** | |
| **Potential problems and alternative solutions** | Finding suitable specialist to help, Creating animations perfectly. |
| **Minimum work required** | 4 MONTHS (3 Students) |