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(57) Abstract :

ABSTRACT Gamified knee exerciser with real-time health monitoring system The present disclosure introduces a gamified knee exerciser with real-time health monitoring system 100. It comprises of adjustable chair 102, L- Shaped lever 104, ROM dial set up 106, processing unit 108, Screen display unit (SDU) 200 comprising of SDU supporting table 202, data acquisition unit 300 comprising of dynamometer 302, rate gyroscope 304, the sensor-based medical assistant system 400 comprising of ECG Sensor 402 and the Blood Pressure Sensor 404,feedback module 500, gamification element 502, virtual reality headset 504, user interface 600 comprising of control panel 602, fail safe interlock system 700 . This gamified knee exerciser not only transforms the way users manage knee osteoarthritis but also aids in rehabilitation for sports injuries. Reference Figure 1

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