
**UNIVERSITY OF WEST ATTICA**

**Department of Informatics and Computer Engineering**

*Lesson:* **Human-Computer Interaction**

**Dismissal Work for the academic year 2023-2024**

*Teachers:* **Associate Professor Phoebus Mylonas,**

**Associate Professor Christos Troussas**

## Work Topic

The topic of the thesis concerns the creation of an interface system for a virtual gym. The user of the application will be the visitor of the virtual gym. The aim of the thesis is the good design and implementation of the user interface system, following the basic principles of Human-Computer Interaction.

## Job requirements:

**A.** Application

ÿ **Simulation of navigation and interaction with various objects in the virtual gym.**

- o Simulate browsing and interaction with the virtual gym.
- o Display of gym exercises and nutritional advice through the application.
- o Ability to track user progress and provide feedback regarding diet and exercise.
- o Interactive interaction with the virtual nutritionist and trainer.
- o Implementation of a fitness product purchase simulation feature and nutrition programs.
- o Ability to create customized training programs for users, taking into account their personal needs and goals.
- o Integrate assessment of the user's physical condition and provide individual advice to improve overall health.
- o Interactive games and exercises that promote proper technique and fun during exercise.

*You are free to implement additional functions for your application, if you wish.*

You are invited to design how these interactions with the software can be made; visualizing the result and/or informing the user, where necessary, is important.

ÿ **Simulation of the user interface environment.**

The interface environment should be designed in such a way that it resembles a gym. Therefore, it will contain gym rooms, in which which will contain exercise equipment, etc.

**B.** Analysis of the function "Purchase of fitness products and programs" diet»

ÿ For the above function, a Hierarchical Analysis of Tasks is requested .

The implementation of Question A should be accompanied by the following manuals:

1. Concise user manual with detailed screenshots and a concise Analysis and Design Manual of the application (Technical Manual). The technical manual will also include the Hierarchical Analysis of Tasks of Question B.
2. On-line help (provided while running the application).

***Important Note:***

o To implement your work, you can choose any language for GUI1 programming, or Unity; it is not allowed to be in the form of web pages that run from a web browser.

o Assignments submitted after the submission date and assignments sent via email will not be accepted.

o Working group: up to 4 people.


*Image source: Link*

1 GUI: Graphical User Interface