**1.Abstract**

1.Abstract

This paper elaborates a proposed plan to develop a software application which will aid and assist any individual in keeping track of steps taken, active minutes, water intake, and even your calorie consumption and body mass index. All of these factors assist a person in better managing their daily routine and working toward a healthier one.

With health and fitness apps, anyone will be able to visually see himself improve and progress. Since consumers may now receive professional guidance in the comfort of their own homes, these applications have significantly improved the delivery of healthcare.

**2.Introduction**

The aim of this paper is to provide a piece of software which will be of a great use in personal and professional purposes in healthcare domain. Project planning, effective cooperation, time management, and technical expertise in software systems and their architecture are just a few of the obstacles the project poses.

Fitness application will be used for a variety of different purposes including obtaining information about healthy products, providing a list of exercises, keeping track of nutritional and dietary information as well as calorie intake.

As a goal the fitness web application, is to provide the user with instructions and examples of one or more types of exercise, physical activity, nutritional programs, or some other fitness topics developed and combined into a functioning system.

**3.Aims and objectives**

The functioning project will be represented by a website that ensures the reachability and accessibility of 2 of the main components of fitness which are diet and exercising.

The home page would be also populated by a list of tools required for monitoring the vital processes of a healthy body.

**4. Requirements Analysis and Feasibility**

This piece of software will be designed to get the clients the products and services our website offers.

We would like to append an online evaluation of:

1.A set of pictures with execution of specific physical exercises

2.Calory calculator which will calculate the amount of calories needed for normal functioning of a healthy organism in recommended routines for 30 minutes of physical activity a day and 2 hours a day.

3. The value derived from the mass (weight) and height of an individual expressed in mass for kilograms and height for meters knows as body mass index calculator.

This project will require the use of:

1. A HeidiSQL database for the initial attempts. In later stages, the database services will be integrated into a cloud server.
2. • HTML • CSS • JSON • AJAX
3. • JavaScript and NodeJS
4. •Use of API(S)

HTML for structuring the webpages.

CSS and Bootstrap for stylizing it.

JavaScript for client side scripting that runs in users browser.

Node.js server-side parsing of Javascript.

We will be using external JSON files for the data displayed in our fields.

Also, we would be hosting the webpage locally using XAMPP software in the initial steps. Later, the web-hosting services will be involved for a better delivery and accessibility.

A third person overview of a user’s perspective

User will be able to navigate through a list of items and services.

User can purchase these options by having an add to cart button.

The add to cart button will populate a list of user’s basket allowing to add more items or remove them before the final step which is transaction.

The user will still be able to remove or add components before proceeding to checkout.

After clicking proceed to check out the user will be required to input his credit/debit card credentials.

A first-person overview of a user’s perspective:

-create an account

-get signed in to make a purchase

-click on the add to basket button along with every product or service provided to save your choices to my basket

-verify the “my basket” and make changes to it

-proceed to checkout (final chance to review the “my basket”)

-make a payment

System:

-will route the user to desired pages

-will send and email based on specific requests

-will verify validity or the user’s inputs.

-will check the stock availability, if a product is not available the system will pop a “out of stock” message.

-will check if the transaction can be done

**Methodologies**

A. Systems development life cycle

With a project of this size, we decided to make things easier by including a system development life cycle into it. We chose the Waterfall model, which allowed us to move into a linear sequential flow. This indicates that a phase in the development process can only start if the phase before it is finished, assuming that there was no overlap.

Advantages:

1. Simple and easy way to understand and use

2. Well understood milestones.

3. Works well for smaller projects where requirements are very well understood.

Disadvantages:

1. High amounts of risk and uncertainty

2. Poor model for long and ongoing projects.

3. Adjusting scope during the life cycle can end a project.

B. The different systems and components of the completed product will be modelled using the UML (Unified Modelling Language), which provides a useful framework for visualizing how the various modules interact and enables the construction of the required component elements.

An image speaks a thousand words. This idiom refers to the UML diagrams, which will simplify our work and free up room for improvement. My colleague and I both believe that utilizing UML will keep us focused on the proper objectives.

Diagram

Description automatically generated

C. We have picked Ajax as our software development framework since it employs a variety of client-side web development approaches to build asynchronous online applications. More precisely, we chose this framework since we started using Ajax in several modules in year three.

**Version control software**

Given that we have organized ourselves about the cooperation, we have chosen to utilize the distributed version control system Git for our project. Git is a distributed version control system that records systems changes in any group of files.

Diagram

Description automatically generated

How do we interact with GitHub.

1. We have a repository (repo) which contains a folder in which all files and history are stored.

2. Branch a workplace in which we can make changes which wont affect the live site.

3. Markdown (.md) is a way we can write in GitHub which coverts plain text to GitHub code.

4. Commit Changes this will save our records of a change made to a file withing the repo.

5. Pull Request it’s the way to ask for changes for a branch to be merged into another branch that will allow multiple users to see, discuss and review work being alone.

6. Merge after a pull request is approved the commit will be pulled in or merged from one Brach to another branch.

7. Issues - users may report new tasks and content fixes using issues, and they can also follow their progress on a project board from start to finish.