



PES
UNIVERSITY

Python for Computational Problem Solving(PCPS)

UE23CS151A

Mini Project
SEMESTER-I

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FITUM

FITNESS MONITORING SYSTEM(OVERVIEW)

This project aims at developing a Python-based Fitness Monitoring System called FITIUM. Fitium aims at providing a Fitness Tracker cum Analyser using weight, height, steps etc for modern health analysis such as heart rate assessment, BMI Calculation etc. Fitium is a customisable lightweight application supported by recent versions of Python.

End Users

- Individuals looking for a holistic fitness tracker
- Individuals with health problems/concerns
- Fitness Enthusiasts



WORK DISTRIBUTION

ABHISHEK P(PES2UG23AM002)

- Implement Blood Pressure Monitoring.
- Implement Sugar Level Analysis.
- Oversee the Integration of different components and Co-ordination of the project.

AADI S(PES2UG23EC002)

- Implement Heart Rate Assessment.
- Project Presentation and formatting.
- Target heart rate

HARSHA(PES2UG23AM042)

- Implement BMI Calculation.
- BMI body type indication

CHANDAN R(PES2UG23CS142)

- Implement Calorie Burn Estimation.
- Implement Drink Water Alarm.
- Code integration of heart rate assessment and sugar level analysis.

Modules

- Tkinter
- pip
- time
- Pylar
- Tkmacosx

KEY FUNCTIONS

- BMI calculation
 - Calorie burn estimation
 - Blood pressure monitoring system
 - Sugar level analysis
 - Heart rate assessment
 - Drink water alarm
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Heart Rate assessment

For analysis of heart rate to find target heart rate based on age, and resting heart rate to indicate abnormal conditions. Measured using electrical (electrocardiography) or Oximeter.

Drink Water Alarm

System to help the user to be hydrated throughout the day and reminds him to take water in regular intervals to have a good health.

Blood Pressure(BP) monitoring

BP monitoring with status classification on heart beat pace(systolic or diastolic) based on age and fitness.

BMI calculation

Body mass index for height-weight comparisons, weight status indicators and height-weight goal setting.

Calorie burn estimation

Calories burnt based on steps, pace of walk/jog/run.

Sugar level analysis

Sugar level analysis for pre-diabetes and diabetes with fasting and post prandial sugar levels.

References

- YouTube
- chatGPT
- GeeksforGeeks
- Codemy
- Cleveland Clinic
- Canva



THANK YOU

