
# Computer Science Project Synopsis

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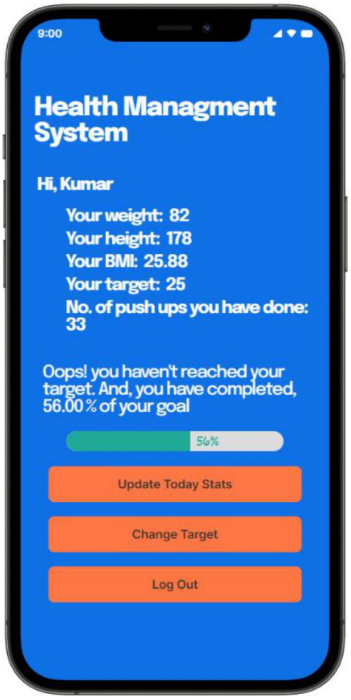
# Health Management System

## Introduction

"Health Management System" that our team has developed is an application. It is developed to look after the day-to-day health activities and professionally track them. Everyone is provided a separate space in our program which indeed provides an enriched experience.

This type of system helps the users to track their activities seamlessly. We give a proper perspective of your activities to analyse and improve in your way.

Achieve your fitness goals in a fun and interactive way with our program. Set up a friendly competition with friends and family to keep everyone accountable and on the right track toward their goals.




Relax your body, mind, and soul. End your day with quiet reflection and rest your mind with exercise and story contents that will help you drift off to sleep.

## Objective of the project

"Health Management System" is intended for general wellness and fitness purpose. It helps to achieve excellence in their target of managing their health data and shine off.

We were focusing on using modern software tools by applying in situations where it is needed to keep track of health and use it for human welfare. Finally we came up with following things,

It incorporates various features like an Account System for every user and a way to compete themselves with others using their performance data. To achieve this, we have introduced an innovative leader board system. Every user could compare themselves and achieve a good robustness state. This could turn them into a more productive human than ever before.

## Existing System

Though we could do these works by ourselves, it is a tedious job as it involves paper works. We would require more time to get these things done on paper, which is of course not the case in our project.

# Proposed System

To resolve all these problems we have brought up a new system which reduces the work of users and allow them to stay productive with their invaluable time.

Many software products working are now in markets, which have helped in making the organizations work easier and efficiently. Likewise it would be more efficient if we use the software for health data management.

It helps to automate all the process in the backend which is done manually if it's a paper work. This saves lot of time and money.

## Advantages of proposed system:

- Can be embedded in web or mobile app
- Involves no paperwork
- All calculations are done in backend
- No more complexity
- Portable program

Now let us explore our project in a detailed way.....

We wanted the above proposed system to be simple, reliable and portable.

So we came up with the idea to integrate Python which is a simple powerful programming language and a database managing software. And we finally decided to integrate MySQL(a open source relational database management system) as our backend for Python.

Let us see one of our database's sample

| Name | Password | target | pushUps | pullUps | Weight | Height |
|---|---|---|---|---|---|---|
| Tarun | 54pass | 20 | 1 | 1 | 72 | 175 |
| Sanjay | 0kou | 20 | 0 | 0 | 62 | 163 |
| cohiran | vacKey | 20 | 0 | 0 | 80 | 167 |
| Dharan | password | 20 | 0 | 0 | 72 | 168 |
| vigneshwaran | walkerapp | 20 | 0 | 0 | 54 | 157 |
| Ran | 67pass | 20 | 0 | 0 | 71 | 177 |

As we said before we have an account system so that everyone has a separate space.

# Python Program

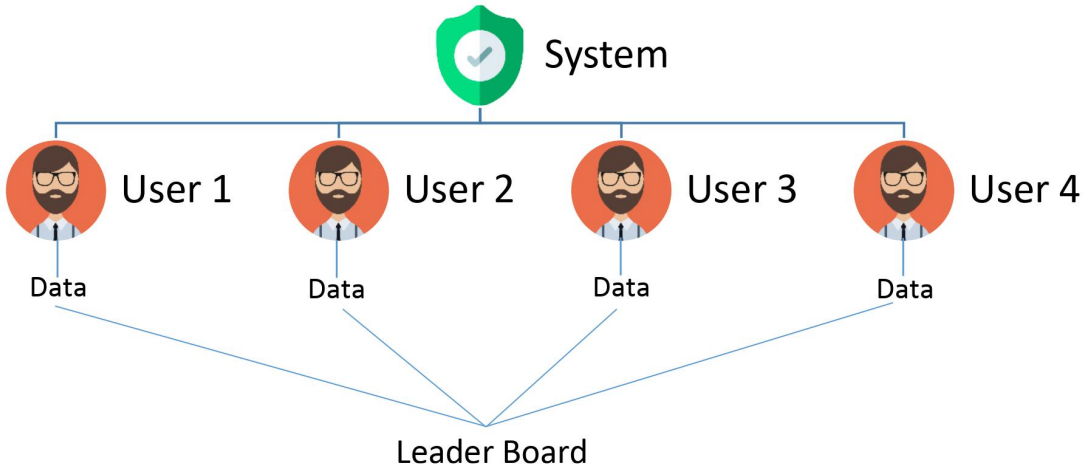
```
import mysql.connector as ms
import time
db=ms.connect(host='localhost',user='root',passwd='p,d
atabase='project')
myc=db.cursor()

def choice():
    print("1. SignUp")
    print("2. Login")
    print("3. View Leader Board")
    inputChoice=int(input("Enter your choice: "))
    if(inputChoice==1):
        SignUp()
    elif(inputChoice==2):
        Login()
    elif(inputChoice==3):
        LeaderBoard()
    else:
        choice()

def SignUp():
    print("\n" * 20)
    userName=input("Enter User Name to Sign Up: ")
    myc.execute("select Name from userData where
Name='{Name}'".format(Name=userName))
    tmp1=myc.fetchall()

    if(tmp1==[]):
        password = input("Enter Password for your
account: ")
        weight=int(input("Enter your weight in Kg: "))
        height=int(input("Enter your height in cms:
"))
        sql = "insert into userData
values('{}','{}',{},{},{},{},{})".format(userName,
password,20,0,0,weight,height)
        myc.execute(sql)
```

```
            db.commit()

            print("\n(+_+) Your account has been created")
            Login()
        else:
            print("\nOops!Seems a account already exists
with this name.Please try with different name")

def Login():
    print("\n"*20)
    userName = input("Enter User Name: ")
    com = "select Name from userData where
Name='{Name}'".format(Name=userName)
    myc.execute(com)
    tmp1 = myc.fetchall()

    if(tmp1!=[]):
        password = input("Enter Password: ")
        com = "select Password from userData where
Name='{Name}'".format(Name=userName)
        myc.execute(com)
        tmp2 = myc.fetchall()
        #print(tmp2)
        for i in tmp2:
            if (i[0] == password):
                for i in "Login Successful":
                    print(i,end="")
                    time.sleep(0.06)
                time.sleep(2)
                DashBoard(userName)
            else:
                print("password incorrect")
    else:
        print("Account not found")

def DashBoard(user):
    print("\n" * 20)
    print("\nHi,",user)
    time.sleep(2)
```

```
    myc.execute("select Weight from userData where
Name='{Name}'".format(Name=user))
    weight = myc.fetchall()
    myc.execute("select Height from userData where
Name='{Name}'".format(Name=user))
    height = myc.fetchall()
    myc.execute("select target from userData where
Name='{Name}'".format(Name=user))
    target = myc.fetchall()
    myc.execute("select pushUps from userData where
Name='{Name}'".format(Name=user))
    pushUps = myc.fetchall()

    for i in weight:
        print("\tYour weight: ",i[0])
        weightF=i[0]
    for i in height:
        print("\tYour height: ", i[0])
        BMI=weightF/(i[0]/100)**2
        print("\tYour BMI: ","%.2f"%BMI)
    for i in target:
        print("\tYour target: ",i[0])
        tmp5=i[0]
    for i in pushUps:
        print("\tNo. of push ups you have done:
",i[0])
        tmp6=i[0]
        if(tmp5<=tmp6):
            print("\nYay! you have reached your
target\n")
        else:
            percentage=(tmp6/tmp5)*100
            print("\nOops! you haven't reached your
target. And,")
            print("you have
completed,","%.2f"%percentage,"% of your goal\n")
    time.sleep(2)
    print("\t1. Update today's health stats\n\t2.
Change Target\n\t3. Log Out")
```

```
    choice=int(input("\t\tEnter your choice: "))
    if (choice == 1):
        ChangeIT(user, 1)
    if(choice==2):
        ChangeIT(user,2)

def ChangeIT(user,c):
    if (c == 1):
        valueInput = int(input("\t\tEnter No. of push
ups you done today: "))
        myc.execute("update userData set pushUps
={value} where Name='{Name}'".format(value=valueInput,
Name=user))
        db.commit()
        DashBoard(user)
    elif(c==2):
        valueInput = int(input("\t\tWhat's your
target?: "))
        myc.execute("update userData set target
={value} where Name='{Name}'".format(value=valueInput,
Name=user))
        db.commit()
        DashBoard(user)

def LeaderBoard():
    print("\n" * 20)
    print("------------\nLeader Board\n------------")
    myc.execute("select Name ,pushUps from userData
order by pushUps desc")
    tmp6=myc.fetchall()
    for i in tmp6:
        print(i[0],":", i[1])
        time.sleep(0.3)

print("\nWelcome to Health Management System")

choice()
```

## Basic Flow Chart of our program:




- Those data's includes their name and all other personal details and their workout progress
- As said before these data's are stored in MySQL.
- Python is used as frontend to access that database and to reflect those data to the users

# Output

First let's explore welcome page

```
Welcome to Health Management System
1. SignUp
2. Login
3. View Leader Board
Enter your choice: 1
```

1) Now choosing Sign Up option to create a new account

```
Enter User Name to Sign Up: Kumar
Enter Password for your account: 4man
Enter your weight in Kg: 82
Enter your height in cms: 178

(+_+) Your account has been created
```

- Notice that the new account is added in our database

| Name | Password | target | pushUps | pullUps | Weight | Height |
|---|---|---|---|---|---|---|
| Tarun | 54pass | 20 | 1 | 1 | 72 | 175 |
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| Ran | 67pass | 20 | 0 | 0 | 71 | 177 |
| Kumar | 4man | 20 | 0 | 0 | 82 | 178 |

2) Now choosing Login option

```
Welcome to Health Management System
1. SignUp
2. Login
3. View Leader Board
Enter your choice: 2
```

```
Enter User Name: Kumar
Enter Password: 4man
Login Successful
```

- Login was successful

Now comes the main feature which could give user their information.

## Dash Board

```
Hi, Kumar
    Your weight:  82
    Your height:  178
    Your BMI:  25.88
    Your target:  20
    No. of push ups you have done:  0

Oops! you haven't reached your target. And,
you have completed, 0.00 % of your goal

    1. Update today's health stats
    2. Change Target
    3. Log Out
        Enter your choice:
```

- Every user can see their personalised data which could give them idea about their health performance.
- Their progression level is also show with respect to the target that they have fixed.
- Every day they can update the progress in their exercise and workout.
- Also users can change their target anytime.

Updating health stats

```
    1. Update today's health stats
    2. Change Target
    3. Log Out
        Enter your choice: 1
        Enter No. of push ups you done today: 23
```

Finally

```
Hi, Kumar
    Your weight:  82
    Your height:  178
    Your BMI:  25.88
    Your target:  20
    No. of push ups you have done:  23

Yay! you have reached your target

    1. Update today's health stats
    2. Change Target
    3. Log Out
        Enter your choice:
```

Notice the change in database also

| Name | Password | target | pushUps | pullUps | Weight | Height |
|---|---|---|---|---|---|---|
| Tarun | 54pass | 20 | 1 | 1 | 72 | 175 |
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| Ran | 67pass | 20 | 0 | 0 | 71 | 177 |
| Kumar | 4man | 20 | 23 | 0 | 82 | 178 |

## Leader Board Feature

```
Welcome to Health Management System
1. SignUp
2. Login
3. View Leader Board
Enter your choice: 3
```

- This feature can be used to compare themselves with others performance which could motivate them to perform further.

```
------------
Leader Board
------------
Sanjay : 52
Tarun : 42
Kumar : 33
cohiran : 24
vigneshwaran : 19
Dharan : 0
Ran : 0
```

# Development Environment

## 1) Hardware Requirements

Processor: Intel (R) Core ™ i3 or higher version

Memory Size: 1 GB or higher

HDD: 40 GB (Minimum)

## 2) Software Requirements

Operating System: Windows 7 Professional 32-Bit/64 bit (service pack

or higher version Software : Python 3.7.0.

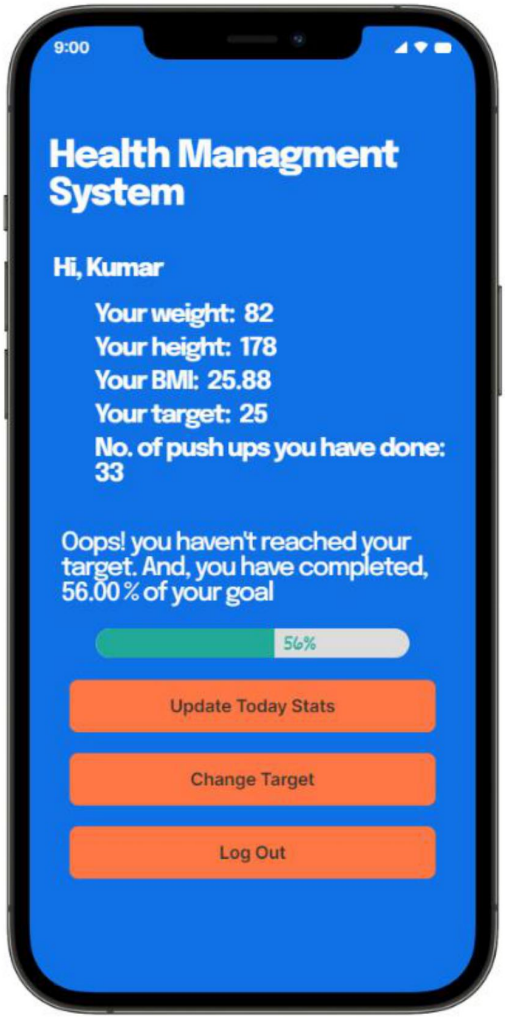
(Recommended)

Front – End: Python interpreter

Back - End: MYSQL

# Future Enhancement

- As a future upgrade which is of course needed, we could convert this as a mobile app or as a web application.
- This would allow the users to access from everywhere.
- We can also give a feature to sync data from anywhere across the globe.
- Adding more workout exercises.
- Customizable designs
- A Security System which would protect privacy better



# Thank You

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