



## **BBM104 ASSIGNMENT-2 REPORT**

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## ➤ What is the problem and main purpose of this assignment

In this experiment, we are expected to build a programme which calculate the calories and runned with commands from an input file and writing expected output in a output file .We have 3 input files which are sport.txt,food.txt,people.txt.The sport.txt file includes id ,name and calories which is burned in 1 minute thanks for this sport , the food.txt files includes id,name and calories which is taken from one portion of this food and the people file includes id,name,gender,weight,height,and date of the birth of this person.

We need to assign each person's attributes after reading the required files. Every person has a calorie to get daily. The daily calorie that each person should take should be calculated by the given function.By the way the command file which is we take as command line argument, includes the food each person eats or sports each person doing. According to the commands from this file, if a person is eating, we must subtract the foods calorie value from the daily calorie to take;if a person doing sport, we must add the sports calorie value to daily calorie to take.Eventually we need to print each persons situation after meal or sport in output file.This situation have to include name,age,daily needed calorie,taken calorie from foods and burned calorie thanks for the sports.

## ➤ Solition in detail

I created 4 classes in this homework.Sport class,Food class,Human class and main class.in human class firstly i defined the required class variables with private access modifiers. Then I created the constructor that makes the every objects meaningful when they are created. Since the class variables are private, I set up the get and set methods to achieve them.after that i opened the people file and I get the needed informations line by line. I created a arrays of human types, and I filled this with objects which are created for each row separately, so, an object was created for every human being and filled into this array.finally i closed the file so i avoid the data leak from this file. I did the same operation for food and sport classes. I read the file line by line, created an object for each line, and sent these objects in array which is type of this class. In our main class, I first got the arrays that contain objects from other classes. then I made array and variable definitions that I would use in programme. then I opened the command file which I got from the command line and also open the monitoring file which will include every persons last situation. then in a loop I read the command file line-by-line until the end of the file.

While reading the line I split the line word by word and sent these word in a array. if the length of this array is not 1, it means that the person is eating or doing sports . if it is not 1, I wrote

the required articles into the monitoring file and sent these informations my backups arrays.By the way according to first digits of the id I decided to its type of sport or type of food. if the length of the array is 1, we need to write the latest status of the people which is performing in the monitoring file.in here I calculated the new needed calorie and add this information every time in the monitoring file.I updated every persons new calorie needed after doing sport or eating food thanks to set method which is in Human class.to sum up I read the command from the command file and fill the monitoring file by using informations of every objects.

## ➤ My Classes and Objects

I created 4 class.in Human class I read the people file line by line and fill the human type array with human objects.I created object for each line so each person.And I sent the needed informations of every person to constructor so I sent every persons properties to this persons objects.to sum up I filled every objects with persons properties and I filled the Human class type of array with these objects.in Sport class I read the sport file line by line and and fill the Sport type array with sport objects.I created object for each line so each type of sport.And I sent the needed informations of every type of sport to constructor so I sent every type of sports properties to this sports object.to sum up I filled every objects with these sports properties and I filled the Sport class type of array with these objects. .in Food class I read the food file line by line and and fill the Food type array with food objects.I created object for each line so each type of food.And I sent the needed informations of every type of food to constructor so I sent every type of foods properties to this foods object.to sum up I filled every objects with these foods properties and I filled the Food class type of array with these objects.in main class I read the command file line by line and doing needed operations by using these object.

## ➤ In this assignment I dealt with

- Variables loops string operations,reference types
- File input/output
- Static variables and usage of them
- Object ,object arrays type of these class
- Try and exception
- Encapsulating a design

