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Jugal Lodaya Project Proposal 1

**HealthyMe**

**Description:**

Our group is working on an application that will allow users to easily monitor their personal health. Our database will keep track of basic statistics about a user’s nutrition, sleep patterns, physical activities, and heart rate. We assume that each user has a fitness tracker such as a FitBit that will record their daily activities, sleep and heart rate, and sync the collected data with our database. Additionally, users will be able to manually log their meals on our UI. Our application is user-focussed, so all the entities we have modeled relate to our main entity - Users. Other entities include: Nutrition (Meals), Sleep, Heart Rate, Activities, Period (Time) and Results. The Results entity will maintain a concise overview of each user’s health, and we will query this table most often when displaying the information on the UI.

**ER Model Details:**

|  |  |
| --- | --- |
| * Users:   + **perform** Activities   + **have** *exactly one* Results   + **need** *at least one* source of Nutrition   + **have** *at least one* Heart Rate   + **need** *at least one* period of Sleep * Activities   + **performed by** Users | * Results   + **had by** *exactly one* Users * Period   + Relates Users to Activities   + Relates Users to Sleep * Sleep   + **needed by** Users * Heart Rate   + **had\_by** Users * Nutrition   + **needed by** Users |

**Data Acquisition:**

We will manually generate realistic data. We have found websites with nutritional information of different foods and we will emulate these in our database. We will add workouts and the average calories burned based on personal experience and online exercise guides. We plan to create a csv file for each table, which we will later import into our DB. For heart rates, we will generate random numbers around a mean with some variation. We have also gathered information about different stages of sleep, and we can use that to populate our DB.

**User Interaction:**

Users will be able to enter a date range and the application will provide statistics about their health. These will include (but are not limited to) resting heart rate, daily food intake, avg. calories burned, height, weight, BMI etc. Users will also be able to adjust their personal information using the UI. They will be able to log in their meals and workouts every day as well as alter or remove previous entries they made. Finally, users will be able to join or leave our app, by adding or removing themselves from our DB.