UNIVERSITY OF TRENTO

DISI

M.Sc in Computer Science

Introduction to Service Design and Engineering

Final project Description

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Virtual LifeCoach Services

This project is implemented by using both REST and SOAP. They system has a local database implemented by using MySQL. This system provides services that allow a user:-

- ✓ To add, edit and delete his personal profile, health-profile, health-profile-goal, activity, activity-goal and reminder.
- ✓ To retrieve his/her all activities, activities-goal, healthprofile goal , reminder for everyday
- ✓ To retrieve information on whether he/she achieve his/her today activity-goal that he/she set.
- ✓ To retrieve information on whether he/she achieve his all health-profile-goal or activity-goal that the user set.
- ✓ To retrieve his body mass index
- ✓ To retrieve information and recommendation based on his body mass index
- ✓ To retrieve things to be done today(today reminder)
- ✓ To retrieve his health profile …etc

The project has different services some of them are

1. **Data Services:** There are number of data services that are implemented in the project, 3 of them are listed below:-
   a. Service link: http://localhost:5900/projectsdeone/person/
      - ✓ **Method** GET
      - ✓ **Description**: It will add person profile
   b. Service link: http://localhost:5900/projectsdeone/person/1
      - ✓ **Method**: PUT
      - ✓ **Description**: It update person profile
   c. Service link: http://localhost:5900/projectsdeone/person/1
      - ✓ **Method**: DELETE
      - ✓ **Description**: It will delete person profile

2. **Business Logic Services:** There are number of business logic service that are implemented in the project few of them are described as follow:-

   a. Service link: http://localhost:5900/projectsdeone/person/1/GeneralCurrentStatus
      - ✓ **Method**: GET
      - ✓ **Description**: It will retrieve current general information for person with id number 1(daily activity report, body mass index status, and health profile goal status)
      - ✓ This service call other 3 service to generate the report this are
        1. http://localhost:5900/projectsdeone/person/1/DailyReport
        2. http://localhost:5900/projectsdeone/person/1/bmistatus
        3. http://localhost:5900/projectsdeone/person/1/Hpgoalstatus

   b. **Service:** http://localhost:5900/projectsdeone/person/1/bmistatus
      - ✓ **Method:** GET
      - ✓ **Description:** It will provide a recommendation for current body mass index of person specified. In order to give the recommendation it call two services (bmi service and healthy measure service) after that it check the value of the bmi from bmi service and normal range from healthy measure service. Finally it recommend and inform the weight and height of the user in pounds and feets using external soap.
      - ✓ The service that are used in this module are
        1. http://localhost:5900/projectsdeone/person/1/bmi/
        2. http://localhost:5900/projectsdeone/HealthyMeasurement

   c. Service: http://localhost:5900/projectsdeone/person/1/bmi/
      - ✓ **Method**: GET
      - ✓ **Description**: it calculate body mass index of the person by using two other service that retrieve weight and height of the person.
      - ✓ The service that are used in this module are
        1. http://localhost:5900/projectsdeone/person/1/Healthprofile/height
        2. http://localhost:5900/projectsdeone/person/1/Healthprofile/weight

3. **Adaptors Services:** we use external soap service to change the weight and height value in pounds and feets so that the user can know his weight and height in different format
   a. **Wsdllocation:** http://www.webservicex.net/ConvertWeight.asmx?WSDL

4. **Process centric services**: console application is implemented for the user to interact with the Virtual LifeCoach Services implemented.

Service Architecture

Here some part of GeneralCurrentStatus (with whole bmistatus service architecture) service architecture will be depicted in the figure below:

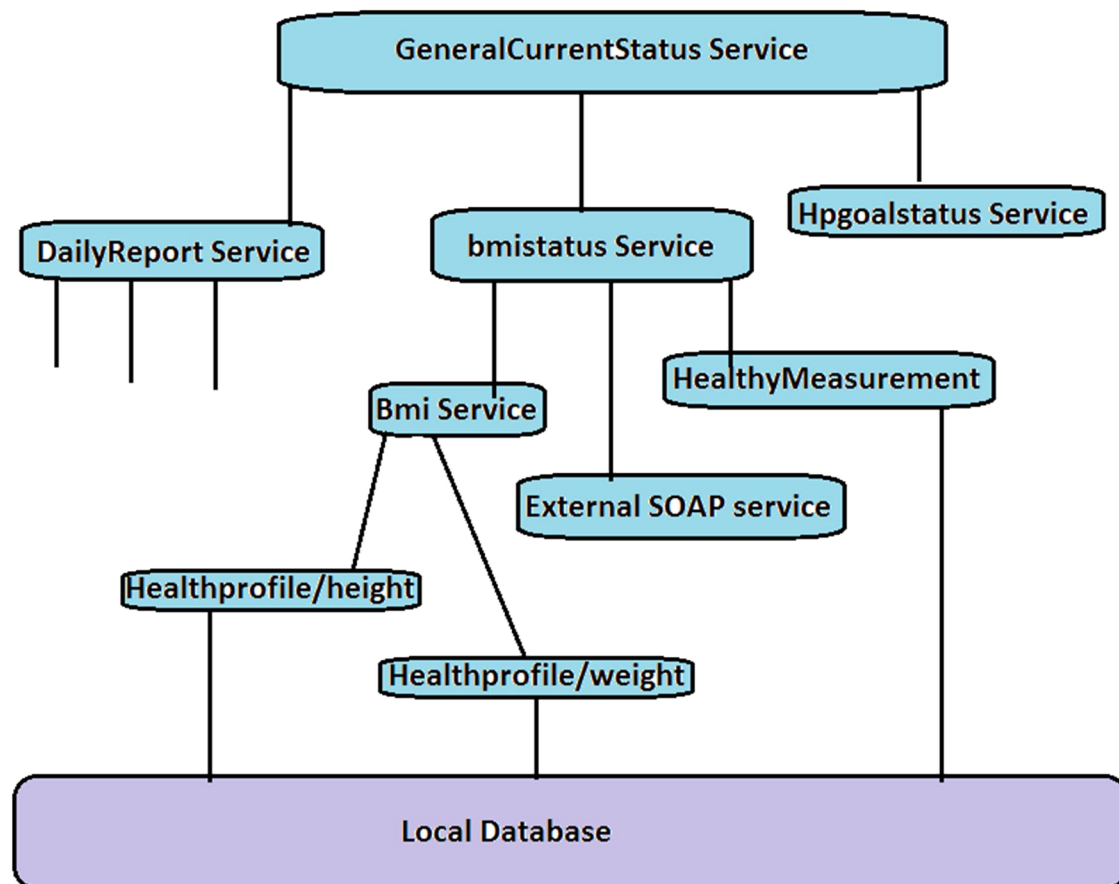(http://localhost:5900/projectsdeone/person/1/GeneralCurrentStatus)

Fig1. Some part of GeneralCurrentStatus Architecture