<u>HackIDC Zermelo team Work Plan:</u>

Tasks:

Ofir and Fuchs:

Schneiderman will help with the communication.

Frontend:

- Home page:
  Includes the user last image and the buttons: start/
  finish session, view history and statistics.

  - o Taking images and show them.
  - o Send the images to the server. (in jpg format if
    it's possible – probably not).
  - o Receive the response from the server.
    Make noise if the user is siting badly according
    to the server response.

    Communication with the server can be done
    using javascript and ajax or angularJS and $http
    service.

History and statistics page (fake):

Includes graphs about the history of the user:

  - o changes in siting health rank during the last
    active day.
  - o siting health rank during the day – average of
    the last 30 days.
  - o changes in siting health rank per day at this
    month / year.

Backend:

Or and Fuchs:

- Produce data:
    - Taking pictures of one of us with white background, convert them to grayscale.
    Save in jpg format with the class name first and then the number of the picture. Like A23 for example.
    (let's say class A is for correct siting position and class B is for quite bad siting position and class C is for risky siting position)

Schneiderman and Gal

- Data processing: using pandas and keras libraries
    - Store and organize the data in the format that keras require.

Schneiderman

- Build the neural network:
    - Do it using the training data and produce decision function – do some tests and use the NN with the best results.

Gal and Or

- Communication with the website:
    - Receive requests with picture from the webpage – convert it to jpg if it's in different format.
    - Achieves the class of the received image using the decision function, convert it to JSON format and send it to the website.

Optional if we have the time:

- Store the last pictures of the user and use algorithm that compare them and recognize if the person in the picture changed position during some period of time that we chose.
  And send that information too in order to alert about sitting in the same posture for too long (its risky too according to Hadas – Gal's girlfriend).