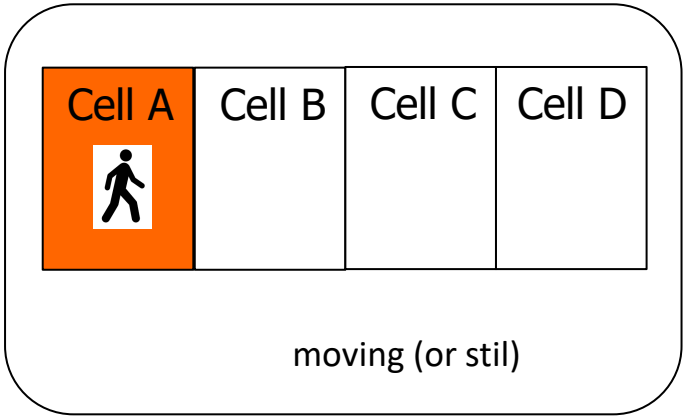
Guidelines for Report 1

Options 1 and 2

Assignment 1

- The first assignment consists on developing an App that provides location and activity information, similar to the image below.
- For this assignment you do NOT need to apply Bayes, only KNN for both localization and activity recognition. You need to determine the features to use, the value of K and the type of distance. You also have to define your own scenario (the university or your home). The smaller the cells, the more challenging the localization problem is and the higher the grade.
- You need to define the number of samples for your training and testing phases.
- Report the accuracy of your App, for localization and activity recognition, using a confusion matrix. (This will be explained in class)



(1) Determine where you are among four zones, &
(2) Determine if you are still or walking

General Guidelines for both Options

- Submission: feedbackfruits
- File name: sps<year>_<group_id>_report1_optionX.pdf
- Max 1 page of including figures, tables and references. Single or double column. We will NOT look at any information beyond 1-page.
- Only one member of the group needs to submit the report.
- At the top of the report mention
  - your group id, names and student ids, phone used, and version of android
  - provide pointers for code you copied/modified.

Guidelines Specific for Option 1

1) Method
   - Describe features used for RSS and ACC, and the reasoning for selecting those features.
   - Describe the classifier. If you use KNN, provide only information about the parameters (e.g. K and distance measured used). Do NOT describe KNN.
2) Evaluation Setup
   - Describe Training method: environment used (your apartment. The university? size of cells), window size, number of samples collected, etc.
   - Describe Testing process.
3) Analysis of results
   - Accuracy in detecting activity and location
   - Use confusion Matrix
4) References & Other relevant information

Evaluation Criteria

- Description of method
- Accuracy of results
- Presentation
- Innovation

Guidelines Specific for Option 2

1) Introduction
   - Describe your Apps goal
2) Challenges
   - Identify the 'key' challenges/difficulties for developing the proposed App.
3) Methods
   - What methods (e.g. KNN, Particle filters) are you planning to use to solve the abovementioned challenges
4) Preliminary results
   - Describe set up and preliminary results.
5) References & Other relevant information