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## EXERCICES SESSION 2

The objectives of this session are :

- Continue to get familiar with BIOGEME,
  - Estimate *Binary Logit* models with some data of your choice.
1. Choose a data set of your choice between *Airline Itinerary Choice* and *Netherlands Mode Choice*.
  2. Download the file (.zip) corresponding to the case study of your choice from the web site (under Laboratories).  
This file contains some models we propose (.mod), a data file (.dat), and some descriptions and interpretations of the models we have proposed (.pdf).
  3. For each model, in the order of the file .pdf :
    - Study the proposed model (.mod) using the description. Estimate the model and interpret the obtained results.
    - Compare your interpretations with the ones we provide you.
  4. Develop some new models using your own hypotheses. Estimate these models and interpret the obtained results. Compare with the proposed models to see if there is an improvement. In order to help you in your approach, we propose you to test the following improvements :
    - Test some alternative specific parameters instead of generic ones, and,
    - Add some socio-economic variables.

### **Your lab participation for discussion during lectures:**

Develop your own specification on the *Airline Itinerary Choice* data set and try to find the best specification you can. Please give back your results (by e-mail to the teaching assistants) between Tuesday 04/10/2011 and Friday 07/10/2011 at noon. Results include a .html file and another Word or .pdf document containing a description of the model specification with its underlying hypotheses (one double-sided page maximum).

**Remarks:**

- The files containing the models specifications can be modified using GNU-Emacs or Wordpad, Notepad is not advised.
- Under the 'Utilities' section of the BIOGEME website (<http://biogeme.epfl.ch>), you can find an excel file which helps you to perform the statistical test in order to compare two models, the 'Loglikelihood ratio test'.
- Descriptions of the variables contained in the different data sets are in the files .pdf which describe the different case studies (cf. exercise session 1).

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