

Project 1 + Python tutorial

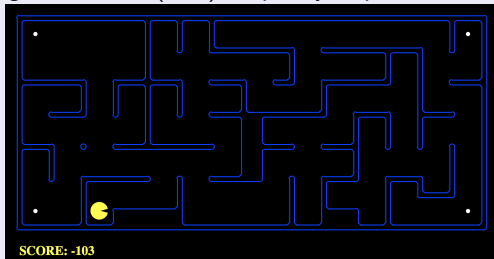
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Project 1 : Pacman is hungry

Purpose

Your task is to design an intelligent agent based on search algorithms (DFS, BFS, UCS and A-Star) for eating all the food (dots) as quickly as possible.



Project 1 : Pacman is hungry

Instructions

The project is by group of 2, these groups will be the same for the two other projects. For the 26th of October at 23 :59, you should have submitted an archive containing at least 4 python files (one per search algorithm) and one pdf file of maximum 4 pages.

Complete assignment

More information is provided on [https:](https://github.com/glouppe/info8006-introduction-to-ai/tree/master/pacman)

[//github.com/glouppe/info8006-introduction-to-ai/tree/master/pacman](https://github.com/glouppe/info8006-introduction-to-ai/tree/master/pacman).

You can download the folder of the project at <https://github.com/glouppe/info8006-introduction-to-ai/raw/master/pacman/pacman.zip>.

Project 1 : Pacman is hungry

Office hours

If you have questions about the project you can :

- ▶ Send a mail to Samy (saittaha@uliege.be)
- ▶ Ask me at the end of the practical sessions
- ▶ Drop by my office (1.104) **BUT** only the Wednesday or the Friday between 1pm and 3pm

Installation

Conda

<https://www.anaconda.com/download/>

Follow the instructions for installation (How to Install ANACONDA link)

Virtual environment

Create a virtual environment :

```
conda create -n pacman python=3.6
```

Activate it :

```
source activate pacman
```

If you want to deactivate the environment :

```
source deactivate
```

Packages

Install packages :

```
conda install package_name
```

How can I use it ?

Where do I type ?

You can use python in 3 different ways :

- ▶ Interactive mode, from a Python shell.
- ▶ In script mode, by executing a Python (.py) file.
- ▶ In notebooks.

Mode interactif

- 1 Start a python shell.

```
$ ipython
```

- 2 Try :

```
>>> print "Hello World!"  
Hello World!
```

Script mode

- 1 hello.py :

```
print "Hello World!"
```

- 2 Execute the script :

```
Hello World!
```

Notebook

- 1 Open a notebook :

```
$ jupyter notebook
```

Basics of python 3

You can clone the following repository

<https://gitlab.erc.monash.edu.au/andreuse/Python4Maths>, and then open a jupyter notebook.

Project : Random agent demo

The code is available at <https://github.com/glouppe/info8006-introduction-to-ai/tree/master/pacman/randomagent.py>

Project : Draw bar plot with matplotlib

The python file containing the bar plot script can be accessed at : <https://github.com/glouppe/info8006-introduction-to-ai/tree/master/pacman/presentations/>