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IPlanPy – The New Charting Tool

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# Concept and Usage

In everyday life, organizing is an important part to be prolific and efficient. Not only in private, also in professional life it’s necessary to have structures. Especially at work there are many cases where to build a structure is a big advantage for planning e.g. a work process/tasks etc. This is where our system steps in: IPlanPy is the perfect solution for creating diagrams. It is easy to handle and a great way of presenting, for example, abstract processes, hierarchies or complex systems. IPlanPy is designed for cooperation work in a team, especially with the Wiimote, but can also be used from a single person simply with the mouse instead of the Wii-controller. The support of collaboration is an important feature of the system. Sketching with IPlanPy will prove the capacity for teamwork in that team, because the best way of usage is in splitting the input roles at two different people. There is an necessity to communicate then and additional to this a way for getting a bigger space for ideas and creativity, because “two heads are better than one”[[1]](#footnote-1). Certainly our system can also be used as a single user, just with a mouse and a keyboard. The areas of application are not limited at all. In every use case where a chart is needed, IPlanPy is your system to use.

# System

To use our system IPlanPy you need a laptop or computer with Linux, a keyboard and a mouse (for single usage) or a Wiimote and therefore also IR-Sensors (for team usage). To get the best performance your system may have the following requirements: ?

With IPlanPy it is possible to build diagrams. The system supports the following features:

* Create a new card
* Switch the card type between:
  + Standard (Title and Field)
  + Header (Title)
* Delete a card
* Change the card color between prescribed colors
* Build a connection between two cards presented as a line from card middle to card middle
* Delete a connection between two cards (Undo)
* Delete all connections from one card
* Save your chart
* Load your saved charts
* Connect your Wiimote (Stores connected Wiimotes automatically)
* New chart (Rejects all unsaved data and clears the screen)

# Implementation

## iplanpy.py

This is the main python script, where all the corresponding strings run together. It contains the class IPlanPy, which includes all relevant handling processes. The user interface of IPlanPy is loaded from the iplanpy.ui script, which contains all start-widgets. The cards are handled in the card.py and the connections in the connectionmanager.py python scripts.

## iplanpy.ui

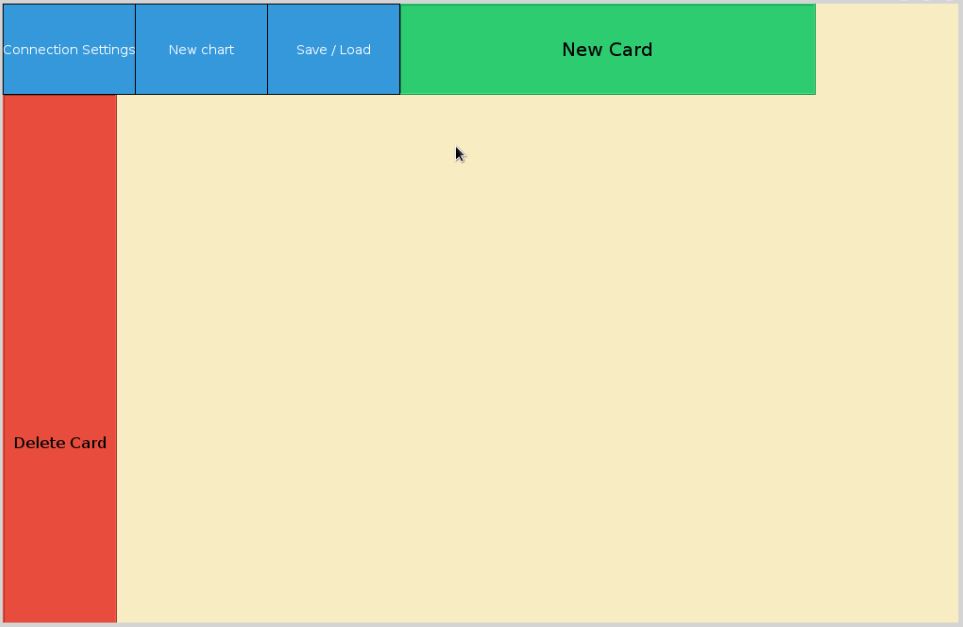
The user interface was built in the Qt Creator (Community) and contains all start-widgets. This are the following buttons and labels: “New Card”, “Delete Card”, “Connection Settings”, “New Chart” and “Save/Load”. It is loaded in the iplanpy.py script.

Abbildung – User Interface

## connectionmanager.py

## card.py

## gestureclassifier.py

## shake.csv

## vectortransform.py

## wii.motes

## wiimote.py

## demo.chart

# Cheat Sheet

The list of all possible interactions with IPlanPy:

|  |  |
| --- | --- |
| Create a new card | Mouse: Click Button “New Card”  Wii: Cursor over “New Card” + Button B |
| Focus card | Mouse: Click card  Wii: Cursor over card + Button B |
| Switch the card type | Mouse: Cursor over card + Alt + Left/Right  Wii: Cursor over card + Left/Right |
| Delete a card | Mouse: Drag and Drop card to “Delete”  Wii: Drag and Drop with Button B to “Delete” |
| Change the card color | Mouse: Cursor over card + Alt + Up/Down  Wii: Cursor over card + Up/Down |
| Build a connection between two cards | Mouse: Drag and Drop card to card  Wii: Drag and Drop with Button B to card  OR (Redo case)  Mouse: Alt + Plus  Wii: Plus |
| Delete a connection between two cards  (Undo) | Mouse: Strg + Minus  Wii: Minus |
| Delete all connections from one card | Mouse: Not possible! Wii exclusive!  Wii: Focus card + shuffle gesture |
| Save your chart | Mouse: Click “Save/Load” + new chart name + Click “Save”  Wii: Cursor over “Save/Load” + Button B + new chart name + Cursor over “Save” + Button B |
| Load a saved chart | Mouse: Click “Save/Load” + select chart + click “Load”  Wii: Cursor over “Save/Load” + Button B + select chart with Button B + Cursor over “Save” + Button B |
| New chart | Mouse: Click “New Chart”  Wii: Cursor over “New Chart” + Button B |
| Connect your Wiimote | Mouse: (Click Scan +) select your Wiimote + Click “Connect”  Wii: Not possible! Just for changing performing Wiimote! |

1. <https://en.wiktionary.org/wiki/two_heads_are_better_than_one> [↑](#footnote-ref-1)