Manual for SDEVAL

10.03.2011

1. General use

The project consists of four python-files:

- createTasks.py
- runTasks.py
- classes.py
- MachineSettings.py

The user gets in touch only with the first two files.

First of all, a task should be created; here the user chooses a computation problem, instances and and computer algebra systems. This is done by calling

```
python createTasks.py <path to the XML Data of SD>
```

(On my computer, the path is „../SD-2/XMLData".)

After that, an interactive user mode is started and one only should follow the instructions given by the program.
Important: The only tables that can be evaluated by now, are FREEALGEBRA and INTPS. For FREEALGEBRA, only Magma and Singular can be chosen; for INTPS you can choose Magma, Singular and Maple.

When the program is done, a folder is created in the current working directory named by the taskname (given by the user while executing createTasks.py) concatenated with „EXPORTFOLDER".
Example: „OurfirstTask.xmlEXPORTFOLDER"

In this folder, one should only adjust the „MachineSettings.py" file to the machine, where one wants to run the computations. It contains information about the commands to run the different CAS and the system time command.
Important: The output of the time command should be *three lines* containing the real, cpu, and system time. This is standard, but there was one machine where one had to put additional arguments to achieve this output.

After adjusting the „Machinesettings.py", take the Exportfolder and copy it to the machine you want to run your task on. On this machine, simply execute
`python <path to the exportfolder>/runTasks.py [-cN ][-mM ]`
The optional arguments `-c` and `-m` are constraints you can make concerning the CPU-Time and the memory usage every single instance is allowed to use; N stands for the number of seconds, and M for the number of Bytes.
Example:
`./OurfirstTask.xmlEXPORTFOLDER/runTasks.py -c86400 -m1000000000`
Here, the instances are allowed to use the CPU for 24 hours and can use 1GB Memory.

The results of the computations can be found in the same folder in files ending with „.res".
While the computation is running, you can see in the proceedings.html which tasks are already done. In the end, there will be another html file created containing a table with information about

the time usage of each task.

Summary:

Steps	**Important Notes**
createTasks.py	Check the current supported CASs and Tables
adjust Machinesettings in the exportfolder	The output of the time command should be three lines
Copy Exportfolder to the machine of your choice	
runTasks.py	proceedings.html for the current status; in the end a RESULT file.