Testing the application „CPUinfoReader“

1.1 Testenvironment:

- Linux (tested on Ubuntu 16.04, using VirtualBox under Windows)
- QtCreator 4.2 and Qt 5.7.0 or higher, although Qt 5.4 or higher should be sufficient

1.2 Start the application:

- From QtCreator: Tests are performed by building and running the application from Qt Creator
- Without QtCreater: start the application „./build-CPUinfoReader-Desktop_Qt_5_7_0_GCC_64bit-Debug/CPUinfoReader" by e.g. command line or double click. Note that this is not a static build, make sure that all necessary Qt-Libraries are installed.

1.3 The following requirements have to be tested:

- 1) Upon starting the application, the only items visible shall be:
  - three buttons labeled "Read CPU Info", "-" and "+"
  - the "statusInfo" text field displaying: "no file read yet. Click button!"
  - the "displayCurrentCPU" text field displaying: "no CPUs loaded"
  - the empty list

- 2) When clicking the button "Read CPU info", the "statusInfo" text field shall display: "CPU Information read successfully: N CPUs were found!"
  N is the number of CPUs in /proc/cpuinfo

- 3) When clicking the buttons "+" or "-" before "Read CPU Info" is clicked, nothing shall happen

- 4) When clicking the buttons "+" or "-" for the first time after "Read CPU Info" is clicked, the list shall display the information of the first CPU described in /proc/cpuinfo

- 5) once any of the two buttons has been clicked, the list shall display the information for the next CPU when "+" button is pressed

- 6) once any of the two buttons has been clicked, the list shall display the information for the previous CPU when "-" button is pressed

- 7) once any of the two buttons has been clicked, the text field displayCurrentCPU" shall display the current CPU number.

- 8) If the CPU with the highest number is displayed, clicking the "+" Button shall have not effect

- 9) If the CPU with the lowest number is displayed, clicking the "-" Button shall have not effect.

- 10) Strings that do not fit in the List Element shall be replaced by the string "..." (e.g. the line "Features : fp asimd evtstrm aes pmull sha1 sha2 crc32" in **/demo/cpuinfo3.txt**)

- 12) Clicking on a item shall expand it

- 13) After clicking on the "closeButton" of an expanded item, the regular list view shall be displayed

- 14) When expanded, long strings shall not be replaced by "…"

- 15) start the application without Qt (as described in 1.2). The real „/proc/cpuinfo“ of the computer shall be displayed and the overall behavior shall conform to the requirements 1-14

1.4 Testing of the QML-Layout:

- No Layout tests are defined. The overall appearance should match the screenshots given in „Design.pdf“

1.5 Files defined for development purposes.

- **Test01 - empty file:** Expected Result: Text file with "id : statusInfo" shall display "No valid CPU information found in file. No data shall be displayed.
- **Test02 - additional separator.txt:** the third element of the list shall display "invalid" (both label and content). The rest of the information shall be regularly displayed in the list.
- **Test03 - changed separator char.txt:** The number of CPUs and properties shall match the content of the file (6 processors with 8 properties each), but all values shall be displayed as "invalid"
- **Test04 – header.txt:** the application shall ignore the header: the user shall experience no difference when compared to using the file **/demo/cpuinfo3.txt**

1.6 Test Result

Testcase	Result
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	

Test01 - empty file	CPU # -1 is displayed when Button „+“ is clicked
Test02 - additional separator.txt:	
Test03 - changed separator char.txt	Displays only one CPU
Test04 – header.txt:	
15	Lines without content, but with valid label (e.g. „power management :“) are displayed as „Invalid“