Beyond4P

Installation and Getting Started

Versions available for Windows (at least Windows 7) and LINUX.
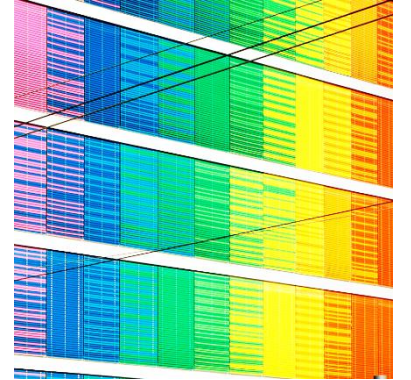
2020-01-20 Georg zur Bonsen

Table of Contents

Beyond4P Installation and Getting Started

You should have available two compressed files:

- B4P Installation.zip   Lean installation package containing all necessary files
- B4P Demo.zip   Nice collection of demonstrator applications written in Beyond4P
- Beyond4P Getting Started.pdf   Guide to installation

The installation file is OS specific, but demo and PDF files are common.

Windows users: In order to use the ZIP Library and Office Library functions, e.g. loading Excel files in .xlsx / .xlsm formats, you need to install following ZIP "7-zip" if you have not done so earlier.

Download is free of charge, "GNU Lesser Public License" (LPGL).   See https://www.7-zip.org/
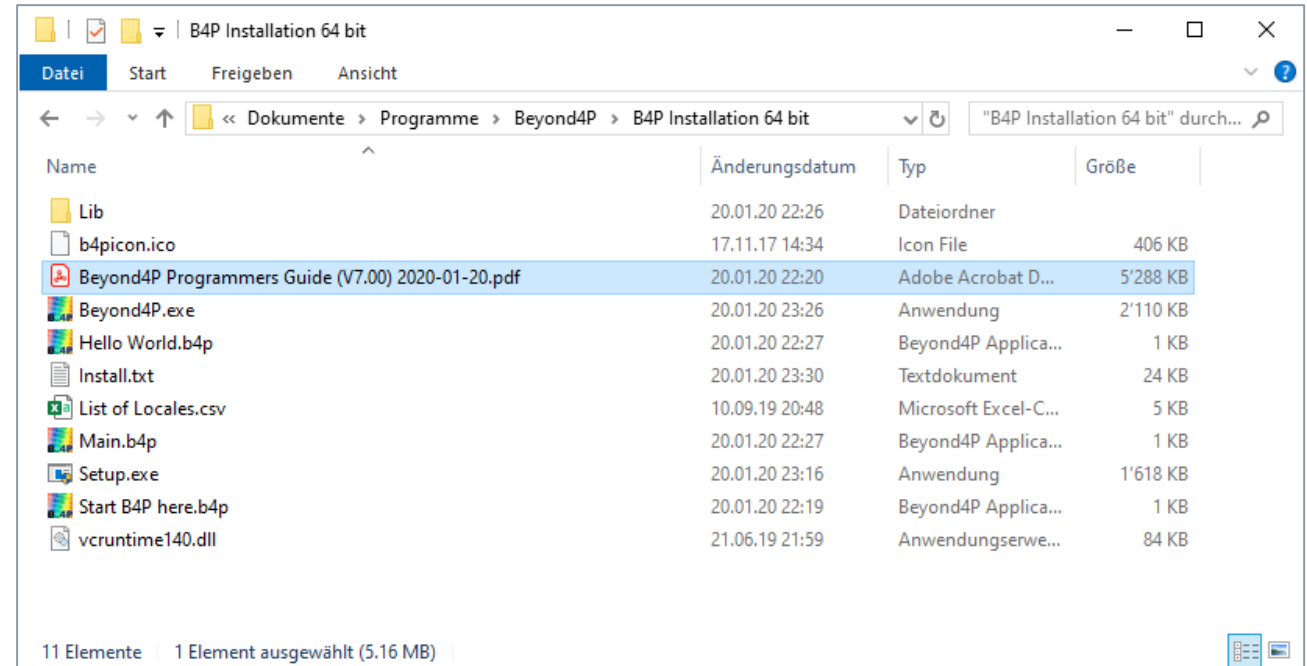
- You can download and install 7-zip it before or after installing Beyond4P. No need to re-install 7-zip in case you install a newer Beyond4P version replacing an older one.
- Without 7Zip installed, Beyond4P will issue exceptions (error messages) when attempting to use these functions and stop running.

Extract the .zip file on a new local directory.

Most files will be copied into the location C:\Program Files (x86)\Beyond4P.

Beyond4P Installation and Getting Started
B4P Installation.zip

Extract the .zip file on a new local directory.

- Setup.exe   Automatic Beyond4P installation program (click to start)
- Install.txt   Actual Beyond4P installation script (written in Beyond4P)
- Beyond4P.exe   Actual Beyyond4P run time machine (language interpreter)
- vcruntime140.dll   Required dynamic link library
- b4picon.ico   Colorful icon file (applied on files with filetype .b4p)
- List of Locales.csv   Contains locale information for a set of supported countries.
- B4P Programmers Guide … .pdf   Programmers guide
- Start B4P here.b4p

  Small Beyond4P app which makes Beyond4P look for 'main.b4p' or 'main.txt'
  in this directory if not started with an B4P application script file (e.g. when starting
  Beyond4P from start menu or command line alone)

- Main.b4p   Typical main file. Put it in a favorable directory location (along with the file above).
- Hello World.b4p   Self-explanatory
- Lib\....   Beyond4P library (contains 4 files, incl. Office and Excel related features)
- Beyond4P License File.json   Available if a valid license is provided.

Most files will be copied into the location C:\Program Files (x86)\Beyond4P.

Run "Setup.exe"

- Due to small number of files, the installation process will be very fast (like Beyond4P itself!)

- **The screen darkens.**
  You will be asked whether the software is allowed to make changes on the system (enable elevated privileges)

  Click on "Yes".

- The installer uses **elevated privileges** in order to obtain full access rights to "C:\Program Files …\..." and make a few additions in the registry (e.g. configurating mouse actions and icons to ".b4p" file type).
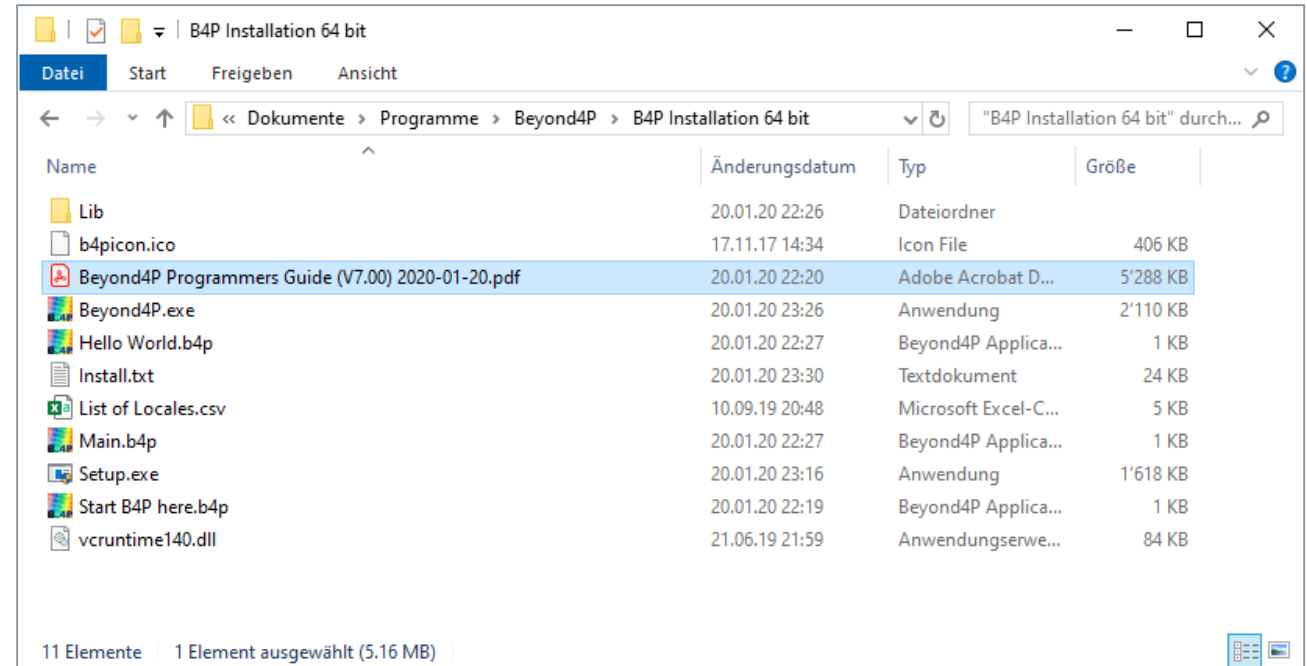
Most files will be copied into the location C:\Program Files (x86)\Beyond4P.

Choose one of the options.

Press **M** for installation on the
local machine. The installation will copy

- The executable, program files and libraries to
  C:\Program Files\Beyond4P\

- License file to
  C:\ProgramData\Beyond4P

- other files like user settings to
  C:\Users\username\AppData\Local\Beyond4P

Alternative, **U** can bus used for current-user
application were the program will also be stored in
local applcation data.

```
Beyond4P - Beyond former expectations of Performance, Productivity, Predictability and Professionalism    —    □    ✕

Beyond4P INSTALLER 7.00 (2020-01-20) 64-Bit
Copyright (C) 2012..2020 Georg zur Bonsen, all rights reserved.

Info: Enhanced access privileges activated for this Beyond4P script.


Starting Beyond4P installations script and enjoy
the 64-bit machine performance with Windows ...


1 >> Check the Beyond4P privileges to run installation program ...


2 >> Installation program - Main Menu ...

    M :  Installation on local machine for all users
    U :  Installation for current user (=you) only
    D :  De-install Beyond4P
    I :  Get identification for generating a license
    E :  Exit installer without actions
Please select:
```

Locale Settings

- If no locale settings have been installed yet, then you will be asked for language followed by country.

- If locale settings are found from a previous installation, then you will be asked if to use them again.

- The list of countries is specific to the languages chosen.

Important: Please use the same locale settings as you are using for MS Excel (and not primarily where you are living) so no conflicts occur regarding decimal comma/points, thousand separators and list separators (, / ;).

```
Beyond4P - Beyond former expectations of Performance, Productivity, Predictability and Professionalism      —   □   ✕

          Lib\Style Library.b4p
          Lib\Utility Library.b4p
          Lib\ZIP Library.b4p

11 >> Restore user and locale settings (if available) ...

          User settings file: skipped.

          No locale settings have been defined yet.
          Automatic detection of list separator symbol: ;
          Text file 'List of Locales.csv' loaded:
          28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
          Numeric data: # numbers with decimal commas converted to decimal points: 0


          Step 1 - Choose language:
           A :  German
           B :  English
           C :  French
           D :  Italian
           E :  Spanish
           F :  Swedish
Please select: A

          Step 2 - Choose country:
           A :  Switzerland
           B :  Germany
           C :  Austria
           D :  Italy
Please select:
```

Shortcut on desktop

- You may optionally add a shortcut icon on the desktop.


```
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28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
Numeric data: # numbers with decimal commas converted to decimal points: 0


Step 1 - Choose language:
  A :  German
  B :  English
  C :  French
  D :  Italian
  E :  Spanish
  F :  Swedish
Please select: A

Step 2 - Choose country:
  A :  Switzerland
  B :  Germany
  C :  Austria
  D :  Italy
Please select: A
Locale chosen: de_CH
Text file 'List of Locales.csv' loaded:
28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
Numeric data: # numbers with decimal commas converted to decimal points: 0

Done setting locale.

12 >> Adding Beyond4P shortcut on the desktop ...


Do you want to create a shortcut on the desktop (N,Y)?
```

If the installation file contains a license file or if your existing installation is already licensed, then you will be asked whether to use this one or not.

Without license key, Beyond4P runs in demo mode with full performance and functionality, but some restrictions apply:

- 5 'table save ...' operations per session

- Max 300 rows allowed to save

- Max 40 columns allowed to save

Either enter the license code (set of hexadecimal values, if available)**, just press [Enter] to skip.**

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```
    Step 2 - Choose country:
     A :  Switzerland
     B :  Germany
     C :  Austria
     D :  Italy
Please select: A
    Locale chosen: de_CH
    Text file 'List of Locales.csv' loaded:
    28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
    Numeric data: # numbers with decimal commas converted to decimal points: 0

    Done setting locale.

12 >> Adding Beyond4P shortcut on the desktop ...


    Do you want to create a shortcut on the desktop (N,Y)?  Y
    Create shortcut on the desktop

13 >> Adding Beyond4P shortcut in the main menu ...


14 >> Windows - Assign file type '.b4p' to Beyond4P (start) and Editor (edit) and to an icon ...


15 >> Program Licensing ...


    Enter the license key (or just [Enter] to skip):
```

Roundup

- The installation is ready.

- You will be asked whether you want to have a personal program folder created where you can start "playing around".

- For beginners: advisable to press Y.

- Following folder will be created:
  C:\Users\username\Documents\Programs\Beyond4P

Afterwards, the installation is complete.

- The colorful Beyond4P icon may appear with some delay, but latest if you restart the computer. Restarting is not needed to start Beyond4P itself.

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```
    Done setting locale.
12 >> Adding Beyond4P shortcut on the desktop ...

    Do you want to create a shortcut on the desktop (N,Y)?  Y
    Create shortcut on the desktop
13 >> Adding Beyond4P shortcut in the main menu ...

14 >> Windows - Assign file type '.b4p' to Beyond4P (start) and Editor (edit) and to an icon ...

15 >> Program Licensing ...

    Enter the license key (or just [Enter] to skip):
>>  Congratulations! Installation has completed.

    Allow some time until the color icons appear on the '.b4p' files.
    or restart the computer.


    Do you want to create a personal Beyond4P program folder ?
```

The Beyond4P program and library files are no longer needed in the decompressed directory. The user guide is also accessible from the start menu. You may delete these files, but desire to keep the ".b4p" files for later use.

- Check if Beyond4P can be started from the main menu.

- The user's manual is also accessible from the start menu.

- When starting Beyond4P without a known starting directory, then it will tell you this and enter 'interactive mode'.
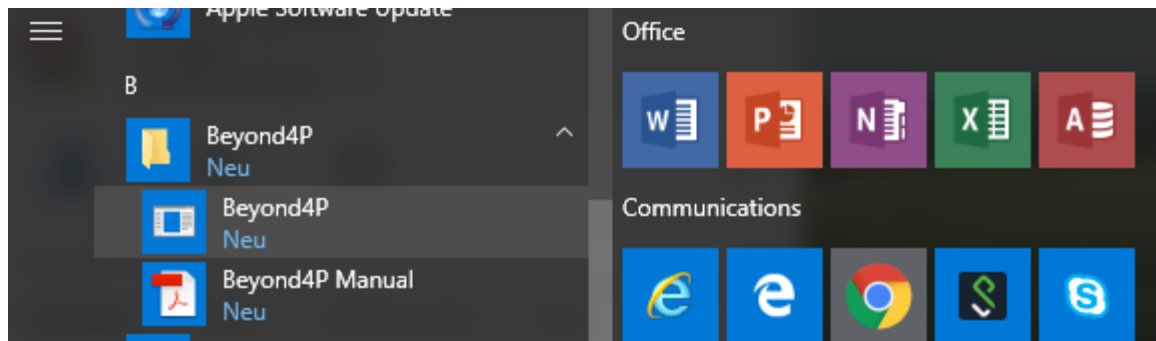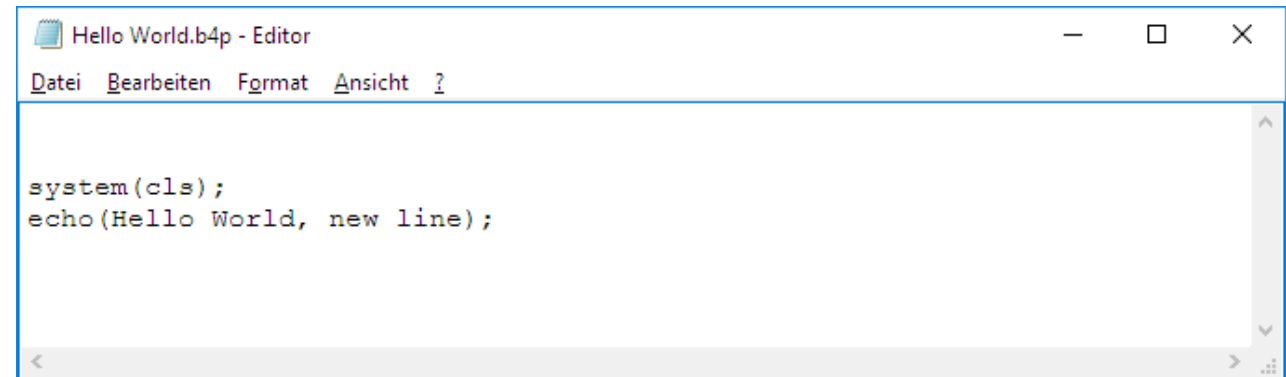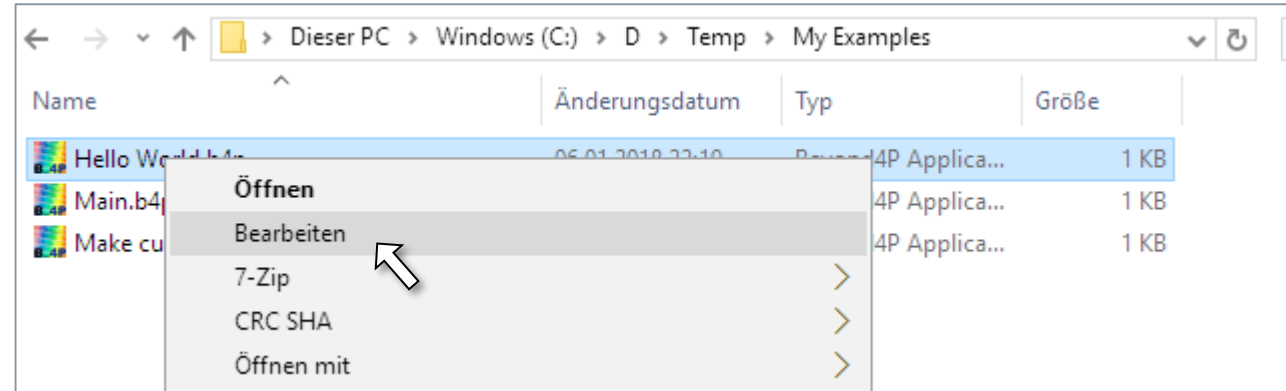
Choose the file and click with right mouse button

A menu appears.

Open (Öffnen)	Start Beyond4P
Edit (Bearbeiten)	Start editor to edit.

Beyond4P Installation and Getting Started
First tries

Go to the new directory created:

- Open Explorer or a file manager and go to directory
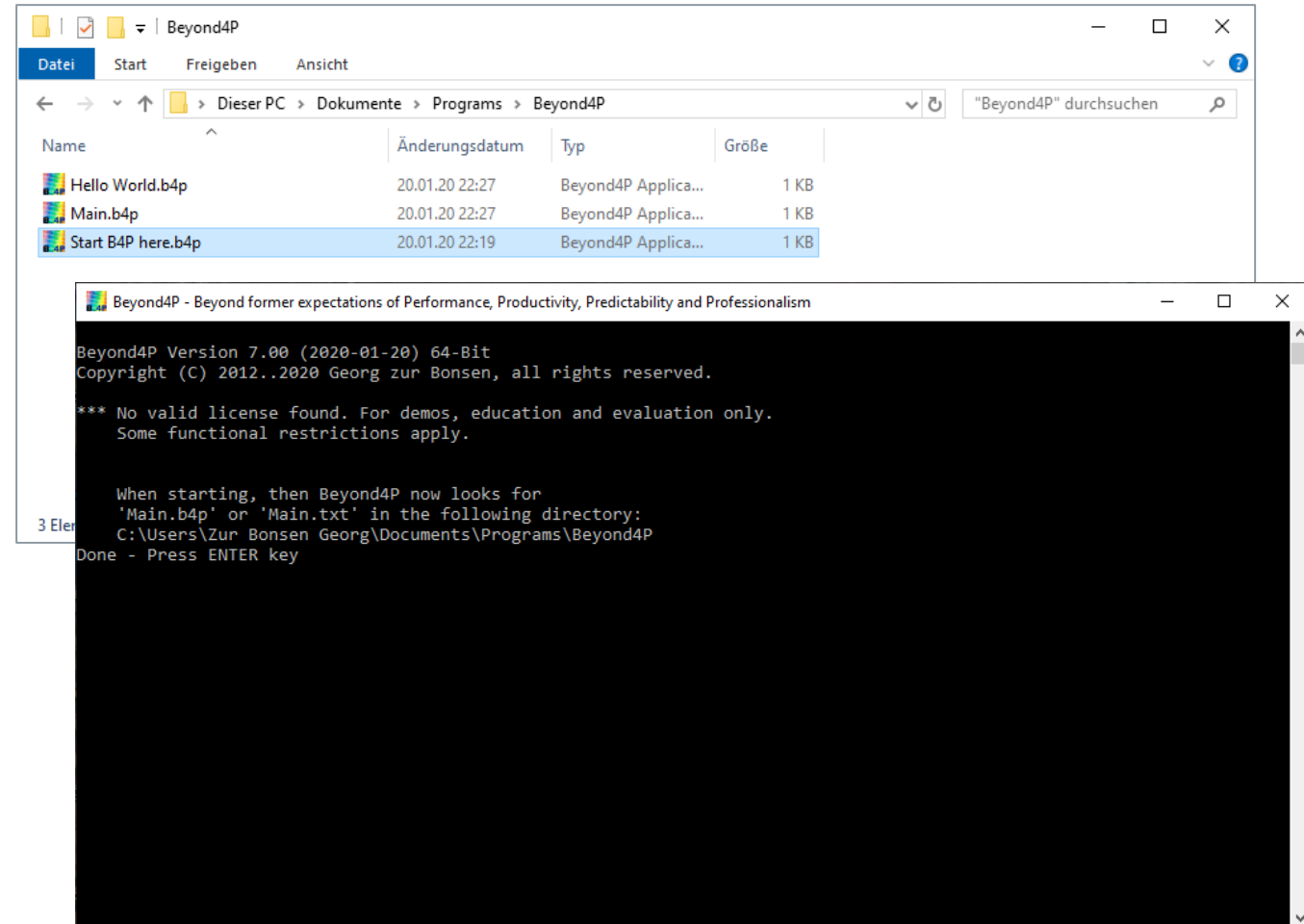
- Click on "Hello World.b4p"
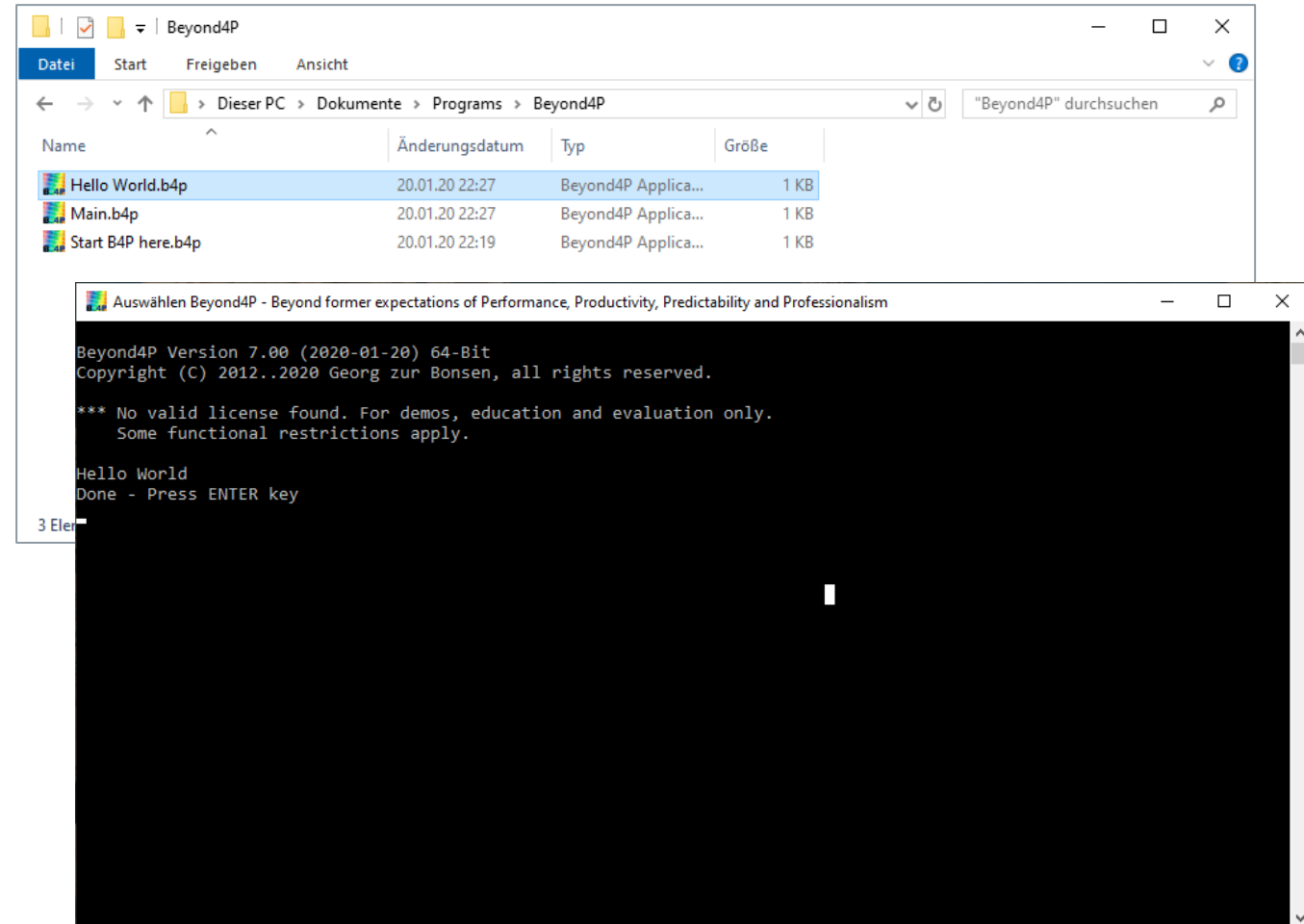
Go to the new directory created:

- Open Explorer or a file manager and go to directory

- Click on "Start B4P here.b4p".

- Now, beyond4P will look in this directory for "Main.b4p" or "Main.txt" if started autonomously without file name specified.

Interactive mode allows you to enter all Beyond4P statements, function calls, starting other programs, etc. from interactive mode.

If you start Beyond4P from start menu or click on "Main.b4p", then interactive mode follows after welcome text.

In Beyond4P programs, you can also use the **interactive;** statement to go interactive, do some inspections, then type **return** to continue running.

Interactive mode supports:

- All Beyond4P statements entered and executed interactively

- Use equal sign followed by expression to calculate a Beyond4P expression

- Use dollar sign to enter operating system commands

- Type "exit" to leave Beyond4P.

This is another way to start interactive mode directly.

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```
C:\Users\Zur Bonsen Georg>C:\"Program Files"\Beyond4P\Beyond4P.exe -i

Beyond4P Version 7.00 (2020-01-20) 64-Bit
Copyright (C) 2012..2020 Georg zur Bonsen, all rights reserved.

*** No valid license found. For demos, education and evaluation only.
    Some functional restrictions apply.

>> _
```
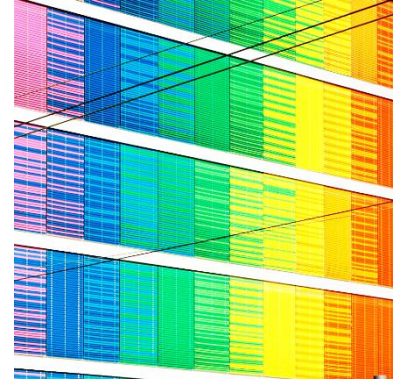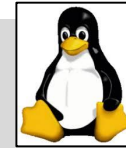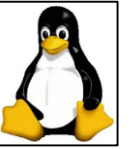
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Beyond4P Installation and Getting Started
LINUX

You should have available two compressed files:

- B4P Installation.zip   Lean installation package containing all necessary files
- B4P Demo.zip   Nice collection of demonstrator applications written in Beyond4P
- Beyond4P Getting Started.pdf   Guide to installation

The installation file is OS specific, but demo and PDF files are common.

LINUX users: The standard "zip" / "unzip" compression utility needs to be available in your distribution. Normally, this is the case.

Download is free of charge, "GNU Lesser Public License" (LPGL).

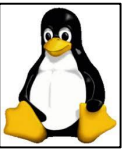To install, use following commands (you may need to add 'sudo' in front of the command to install):
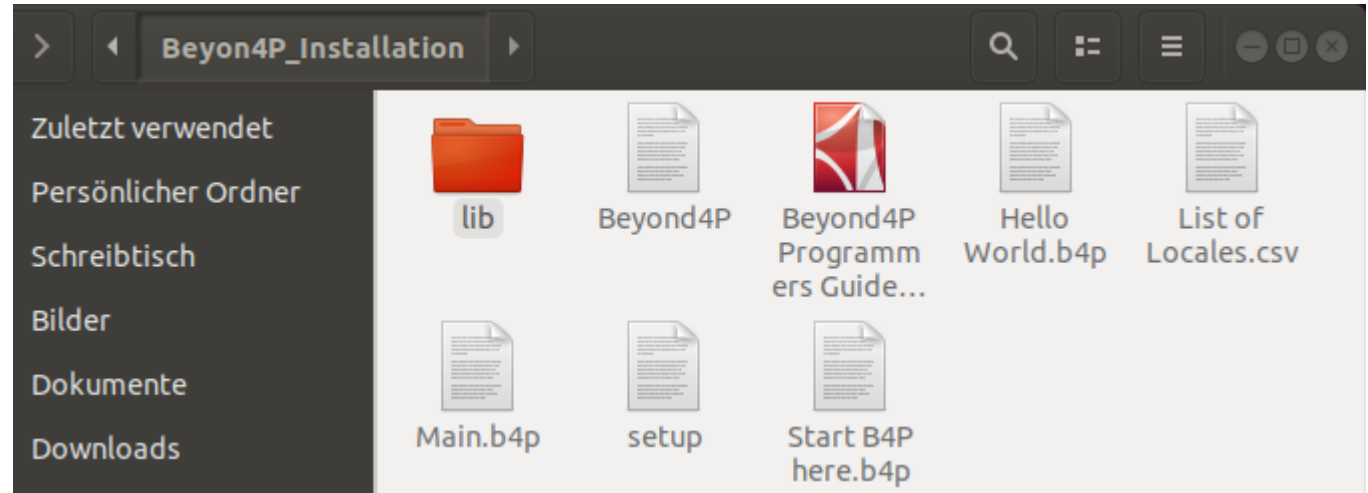
```
apt-get update
apt-get install zip unzip
```

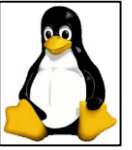# Beyond4P Installation and Getting Started
Starting the Installation

Extract the .zip file on a new local directory.

You should see at least following files and subdirectories.

Most files will be copied into the location C:\Program Files (x86)\Beyond4P.

Beyond4P Installation and Getting Started
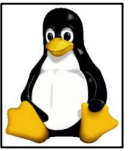# B4P Installation.zip

Extract the .zip file on a new local directory.

- setup   Beyond4P installation script (written in Beyond4P code)
- Beyond4P   Actual Beyyond4P run time machine (language interpreter)
- B4P Programmers Guide … .pdf   Programmers guide
- List of Locales.csv   Contains locale information for a set of supported countries.
- Start B4P here.b4p

  Small Beyond4P app which makes Beyond4P look for 'main.b4p' or 'main.txt' in this directory if not started with an B4P application script file (e.g. when starting Beyond4P from start menu or command line alone)
- Main.b4p   Typical main file. Put it in a favorable directory location (along with the file above).
- Hello World.b4p   Self-explanatory
- Lib\....   Beyond4P library (contains 4 files, incl. Office and Excel related features)

- Beyond4P License File.json   Available if a valid license is provided.

      Most files will be copied into the location C:\Program Files (x86)\Beyond4P.

Type `sudo ./setup`

- sudo command prefix is needed for elevated privileges to install Beyond4P.

- Due to small number of files, the installation process will be very fast (like Beyond4P itself!)

- The setup is actually a Beyond4P script which can be executed like an executable or shell script file because it uses the Beyond4P run-time machine in this directory.

You may be requested to enter your password.

```
georg@georg-VirtualBox: ~/Beyon4P_Installation

Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe

georg@georg-VirtualBox:~/Beyon4P_Installation$ ls
 Beyond4P                                      'List of Locales.csv'
'Beyond4P Programmers Guide (V6.01) 2019-09-01.pdf'   Main.b4p
'Hello World.b4p'                                  setup
 lib                                          'Start B4P here.b4p'
georg@georg-VirtualBox:~/Beyon4P_Installation$ sudo ./setup
[sudo] Passwort für georg:
```

Most files will be copied into the location C:\Program Files (x86)\Beyond4P.

Choose one of the options.

Press **M** for installation on the local machine. The installation will copy

- The executable file to /usr/bin

- The Beyond4P libraries to /etc/Beyond4P/ and

- other files like user settings to /home/username/.config/Beyond4P/.

```
                    georg@georg-VirtualBox: ~/Beyon4P_Installation

 Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe

georg@georg-VirtualBox:~/Beyon4P_Installation$ sudo ./setup

Beyond4P Version 7.00 (2020-01-20) 64-Bit
Copyright (C) 2012..2020 Georg zur Bonsen, all rights reserved.
Beyond4P launched as installer

Starting Beyond4P installation on LINUX platform ...


1 >> Check the Beyond4P privileges to run installation program ...


2 >> Installation program - Main Menu ...

     M :   Installation on local machine
     D :   De-install Beyond4P
     I :   Get identification for generating a license
     E :   Exit installer without actions
Please select: █
```

Locale Settings

- If no locale settings have been installed yet, then you will be asked for language followed by country.

- If locale settings are found from a previous installation, then you will be asked if to use them again.

- The list of countries is specific to the languages chosen.

Important: Please use the same locale settings as you are using for MS Excel (and not primarily where you are living) so no conflicts occur regarding decimal comma/points, thousand separators and list separators (, / ;).

```
                georg@georg-VirtualBox: ~/Beyon4P_Installation

Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe
  Info: User settings file not found. Skipped copying

  Info: No locale settings have been defined yet.
  Automatic detection of list separator symbol: ;
  Text file 'List of Locales.csv' loaded:
  28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
  Numeric data: # numbers with decimal commas converted to decimal points: 0


  Step 1 - Choose language:
   A :  German
   B :  English
   C :  French
   D :  Italian
   E :  Spanish
   F :  Swedish
Please select: A

  Step 2 - Choose country:
   A :  Switzerland
   B :  Germany
   C :  Austria
   D :  Italy
Please select:
```
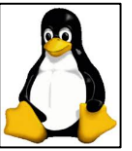
If the installation file contains a license file or if your existing installation is already licensed, then you will be asked whether to use this one or not.

Without license key, Beyond4P runs in demo mode with full performance and functionality, but some restrictions apply:

- 5 'table save ...' operations per session
- Max 300 rows allowed to save
- Max 40 columns allowed to save

Either enter the license code (set of hexadecimal values, if available)**, just press [Enter] to skip.**

```
georg@georg-VirtualBox: ~/Beyon4P_Installation

Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe
     B :   English
     C :   French
     D :   Italian
     E :   Spanish
     F :   Swedish
Please select: A

     Step 2 - Choose country:
     A :   Switzerland
     B :   Germany
     C :   Austria
     D :   Italy
Please select: A
     Locale chosen: de_CH
     Text file 'List of Locales.csv' loaded:
     28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
     Numeric data: # numbers with decimal commas converted to decimal points: 0

     Done setting locale.

9 >> Program Licensing ...


     Enter the license key (or [Enter] to skip):
```
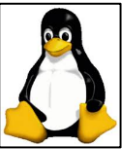
Roundup

- The installation is ready.

- You will be asked whether you want to have a personal program folder created where you can start "playing around".

- For beginners: advisable to press Y.

- Following folder will be created: /home/username/programs/Beyond4P

Afterwards, the installation is complete.

georg@georg-VirtualBox: ~/Beyon4P_Installation

Datei Bearbeiten Ansicht Suchen Terminal Hilfe

```
    Step 2 - Choose country:
     A :  Switzerland
     B :  Germany
     C :  Austria
     D :  Italy
Please select: A
    Locale chosen: de_CH
    Text file 'List of Locales.csv' loaded:
    28 rows, 23 columns in 1st row, 644 fields, widest row has 23 entries.
    Numeric data: # numbers with decimal commas converted to decimal points: 0

    Done setting locale.

9 >> Program Licensing ...


    Enter the license key (or [Enter] to skip):

>>  Congratulations! Installation has completed.



    Do you want to create a personal Beyond4P program folder ?
```
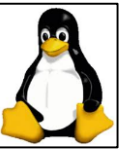
Go to the new directory created:

- cd /home/username/programs/Beyond4P

- As long the Beyond4P application scripts contain the following LINUX "Chebang" statement on the 1st row, then you can start the Beyond4P scripts in the same way as you start shell scripts or executable files.
  1st row must contain: #!/usr/bin/Beyond4P

- LINUX shell allows wildcards, so typing ./He* will start 'Hello World.b4p' if no other file begins with "He" in the same directory.

```
georg@georg-VirtualBox: ~/programs/Beyond4P

Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe
georg@georg-VirtualBox:~/programs/Beyond4P$ ls
'Hello World.b4p'    Main.b4p  'Start B4P here.b4p'
georg@georg-VirtualBox:~/programs/Beyond4P$ ./He*

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*** No valid license found. For demos, education and evaluation only.
    Some functional restrictions apply.

Hello World
Done - Press ENTER key

georg@georg-VirtualBox:~/programs/Beyond4P$
```
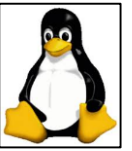
Go to the new directory created:

- cd /home/username/programs/Beyond4P

- Run "Start B4P here.b4p". LINUX allows to short-cut the command by typing
  ./Start*

- Now, beyond4P will look in this directory for "Main.b4p" or "Main.txt" if started autonomously without file name specified.

- See example on the right where /usr/bin/Beyond4P or Beyond4P is typed in as command

```
georg@georg-VirtualBox: ~/programs/Beyond4P

Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe

georg@georg-VirtualBox:~/programs/Beyond4P$ ls
'Hello World.b4p'   Main.b4p  'Start B4P here.b4p'
georg@georg-VirtualBox:~/programs/Beyond4P$ ./Start*

    When starting, then Beyond4P now looks for
    'Main.b4p' or 'Main.txt' in the following directory:
    /home/georg/programs/Beyond4P
Done - Press ENTER key

georg@georg-VirtualBox:~/programs/Beyond4P$ /usr/bin/Beyond4P

Beyond4P Version 7.00 (2020-01-20) 64-Bit
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*** No valid license found. For demos, education and evaluation only.
    Some functional restrictions apply.



    Application Script Checksum: 0xa059c2a489fc1d3d



Started Main.b4p.
This is the main program
Feel free to add some code here ...
Inside the function or procedure call 'interactive':
interactive (); called
Program invoked interactive mode
>>
```
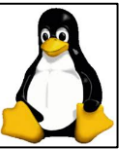
Interactive mode allows you to enter all Beyond4P statements, function calls, starting other programs, etc. from interactive mode.

Use -i switch to start Beyond4P in interactive mode.

In Beyond4P programs, you can also use the **interactive;** statement to go interactive, do some inspections, then type **return** to continue running.

Interactive mode supports:

- All Beyond4P statements entered and executed interactively

- Use equal sign followed by expression to calculate a Beyond4P expression

- Use dollar sign to enter operating system commands

- Type "exit" to leave Beyond4P.

```
                 georg@georg-VirtualBox: ~/programs/Beyond4P

Datei  Bearbeiten  Ansicht  Suchen  Terminal  Hilfe

georg@georg-VirtualBox:~/programs/Beyond4P$ Beyond4P -i

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*** No valid license found. For demos, education and evaluation only.
    Some functional restrictions apply.

>> echo ( Hello World )
Hello World
>> echo ( 2*3 + 4*5 )
26
>> = 2 * 3 + 4 * 5
26 [plain numeral]
>> = average( 3,4,5,6 )
4.5 [plain numeral]
>> for (a[] = 1, a[] <=3, a[]++) echo( "Loop: ", a[] )
Loop: 1
Loop: 2
Loop: 3
>> $ pwd
/home/georg/programs/Beyond4P
>> exit
Inside the function or procedure call 'exit':
exit (); called
Program invoked exit
Code execution will stop.  Exiting program.
_____
Done - Press ENTER key

georg@georg-VirtualBox:~/programs/Beyond4P$
```

Beyond4P

Good Luck with Beyond4P

Try the Demo files (separate ZIP)