**Höhere Fachschule für Informations-
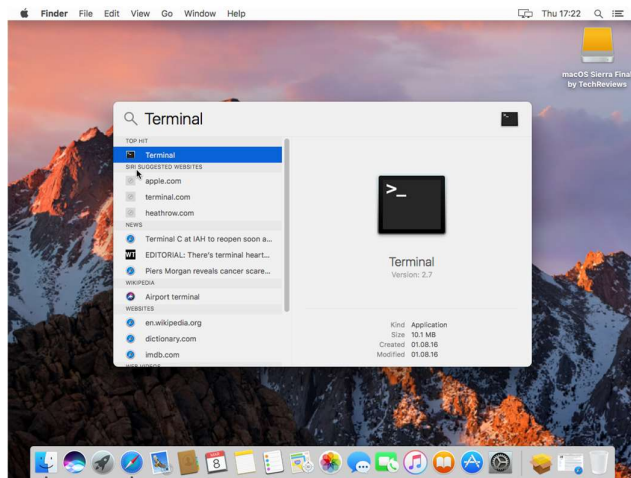und Kommunikationstechnologie**

Vorkurs Informatik – C++ on Mac OS X

1 C++ Compiler installation (APPLE STANDARD DEV TOOLS)

Step 1 – Open the «Terminal»:

In the appearing window type «Terminal» - double click the item highlighted in the below screenshot to bring up the system console…
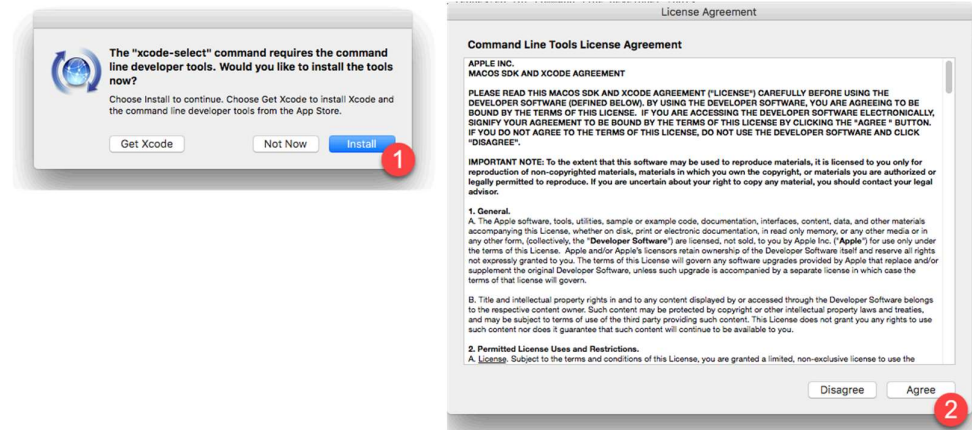

Step 2 – Install the Apple XCode Toolkit by typing the following command:
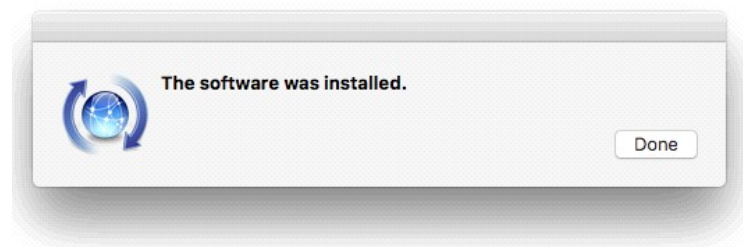
```
xcode-select --install
```

Confirm the popup and the disclaimer:

Step 3 – "The software was installed." Message appears:

Complete the installation by clicking on "Done"

Step 4 – Create "Development" folder:

Back in the Terminal – enter the commands below to create a development project folder…

```
mkdir ~/Development
```

```
mkdir ~/Development/HelloWorld
```

```
cd ~/Development/HelloWorld
```
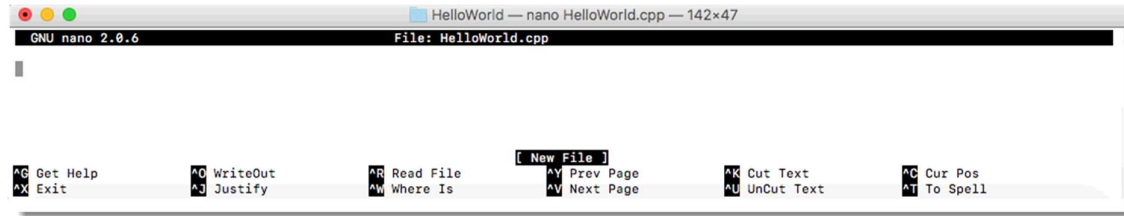
Step 5 – Write some C++ Code by using the "nano" editor:

Type the following command… this will start the "nano" editor and draft the File "HelloWorld.cpp"…

```
nano HelloWorld.cpp
```

```
                              HelloWorld — nano HelloWorld.cpp — 142×47
  GNU nano 2.0.6                         File: HelloWorld.cpp



^G Get Help      ^O WriteOut     ^R Read File     [ New File ]
                                                  ^Y Prev Page    ^K Cut Text     ^C Cur Pos
^X Exit          ^J Justify      ^W Where Is      ^V Next Page    ^U UnCut Text   ^T To Spell
```
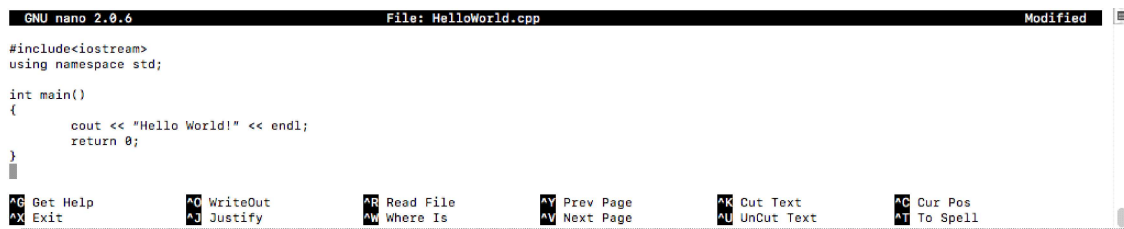
Type the listed Code from below into the editor panel:

```cpp
#include<iostream>
using namespace std;

int main()
{
        cout << "Hello World!" << endl;
        return 0;
}
```

```
  GNU nano 2.0.6                         File: HelloWorld.cpp                              Modified

 #include<iostream>
 using namespace std;

 int main()
 {
         cout << "Hello World!" << endl;
         return 0;
 }

^G Get Help      ^O WriteOut     ^R Read File     ^Y Prev Page    ^K Cut Text     ^C Cur Pos
^X Exit          ^J Justify      ^W Where Is      ^V Next Page    ^U UnCut Text   ^T To Spell
```

Save edited file by pressing the key combination…

`control` **+** `O`

Confirm the Save operation with…

`enter / return`

Quit «nano» by pressing the key combination:
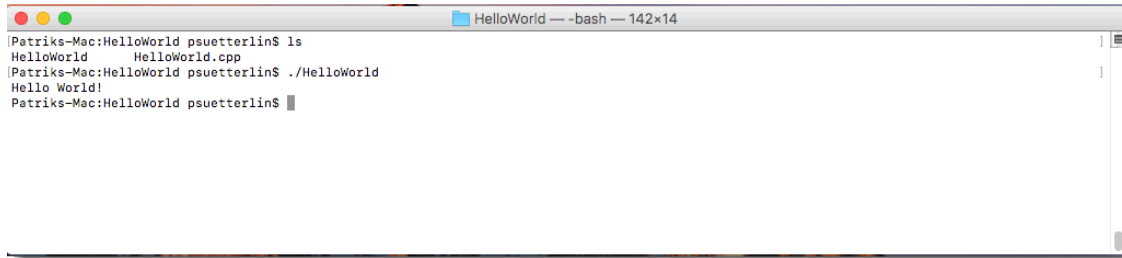
`control` **+** `X`

Step 5 – Compile your program > "HelloWorld.cpp"

In order to compile your program, enter the following instruction into the console:

```
g++ HelloWorld.cpp –o HelloWorld
```

```
                              HelloWorld — -bash — 142×14
Patriks-Mac:HelloWorld psuetterlin$ g++ HelloWorld.cpp -o HelloWorld
Patriks-Mac:HelloWorld psuetterlin$
```
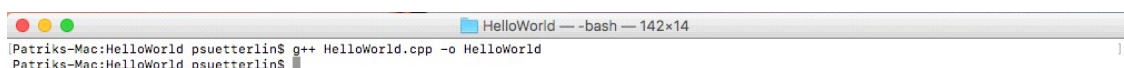
Finally run your program with the command:

```
./HelloWorld
```


The output of your first program is:

```
Hello World!
```

2 Install WINE and Notepad ++ (OPTIONAL FEATURE)

Step 1 – Install Brew:

Run the below command in the "Terminal"…

```
ruby -e "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/master/install)"
```

Confirm the installation with…

When prompted provide your computer password in order to allow the installation !!

Step 2 – Verify Brew installation

Run the below command in the "Terminal" to check the installation of "brew"…

```
brew doctor
```

When everything is set up correctly, you'll see the message:

```
Your system is ready to brew
```

```
Patriks-Mac:HelloWorld psuetterlin$ brew doctor
Your system is ready to brew.
Patriks-Mac:HelloWorld psuetterlin$
```

Step 3 – Brew XQuartz and Wine

Run the below command in the "Terminal" to install XQuartz…

```
brew cask install xquartz
```

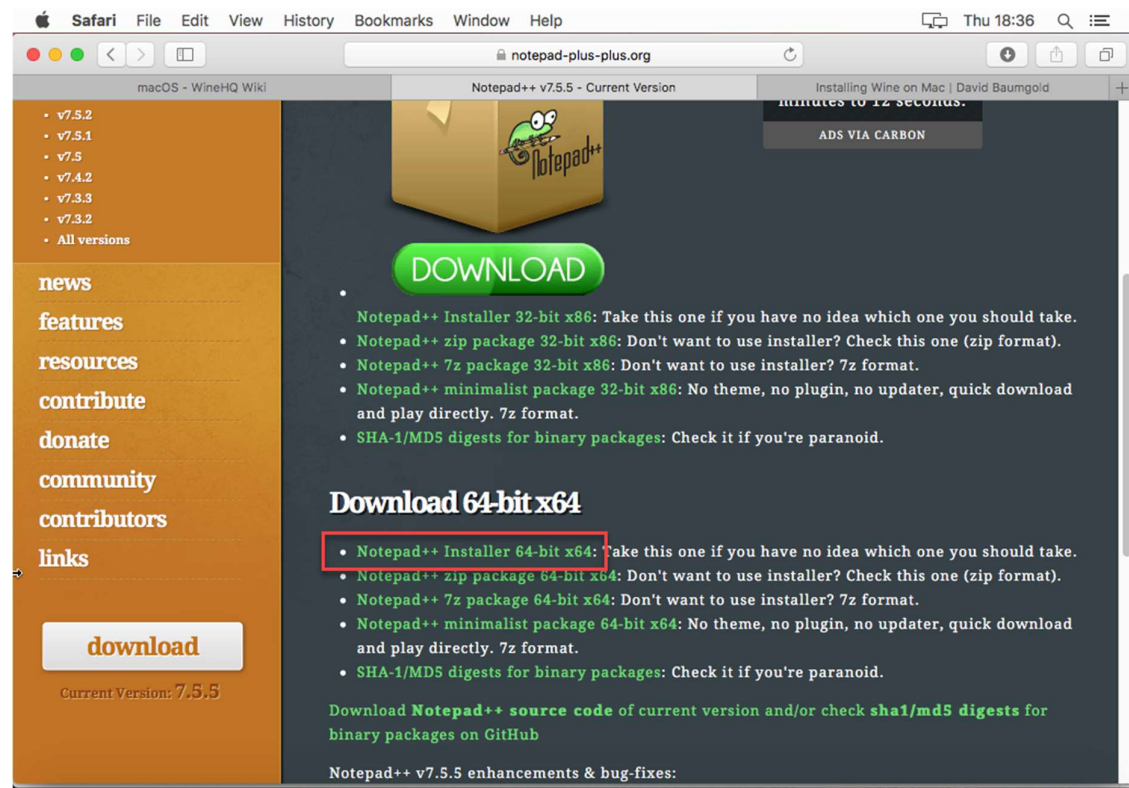When prompted provide your computer password in order to allow the installation!!

Next run the command below to install Wine

```
brew install wine
```

Step 4 – Download Notepad ++ Windows executable:

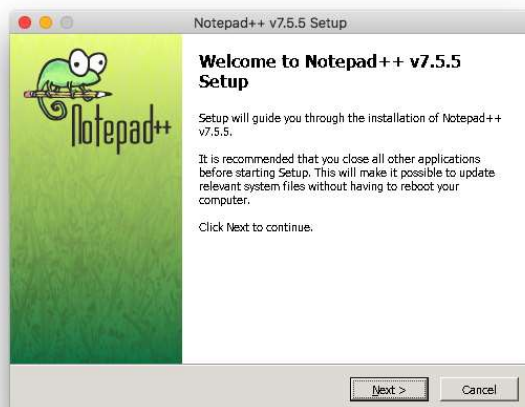Use Safari to download the Notepad ++ Installer from the following web page: https://notepad-plus-plus.org/download/v7.5.5.html

Step 5 – Install Notepad ++ using Wine

Execute the following command in the "Terminal"…
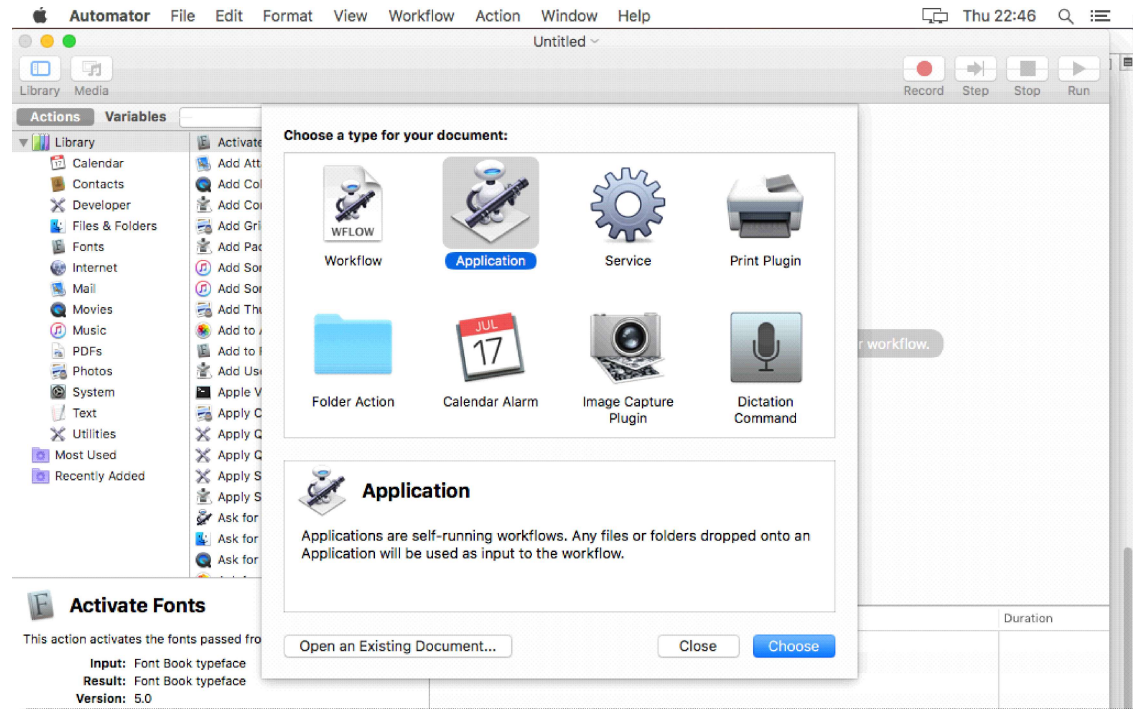
```
wine ~/Downloads/npp.7.5.5.Installer.x64.exe
```

Step through the installation (keep the default installation settings) …

**Step 6** – Run the Apple Tool "Automator"

When the "Automator" you can choose from the below shown options:
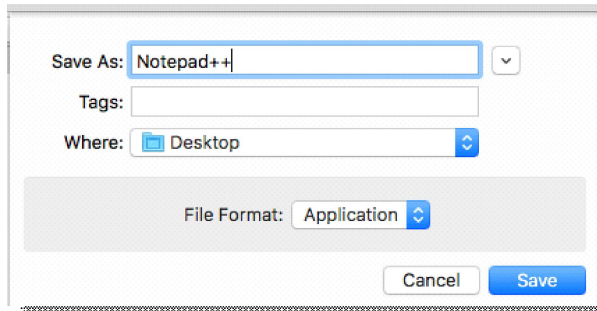Select "Application"

Lookup "shell" in the search bar of the "Automator" tool– this will locate the "Run Shell Script" item.
Double click the item to bring up the editor as shown in the below picture:
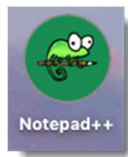
Put in the Script…

```
/usr/local/bin/wine "$HOME/.wine/drive_c/Program Files/Notepad++/notepad++.exe"
```
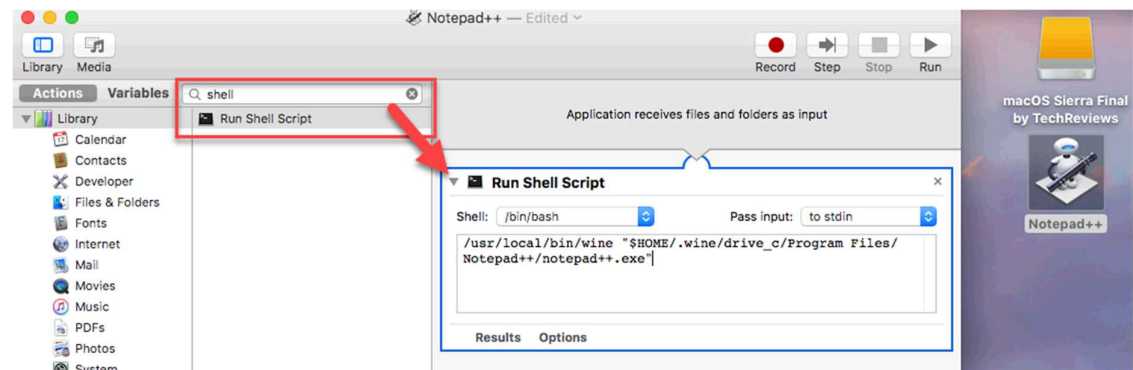
Finally save the written "Automator" Script to the Desktop with the following settings:

You'll find an new icon on the Desktop – feel free to modify the Icon Picture for your convenience:

Double click the icon to start Notepad++

Happy Coding ☺