

# Week1\_Code\_[.Your first Program.]

October 8, 2018

## 0.1 Writing Your First Program

To run python in the terminal use:

```
$> python3
```

```
In [45]: """
        **Name:** Writing your first program
        **Author:** Alexander Bjørnsrud
        **Created:** 2018-09-21
        **ID:** xxxxxxxx

        The purpose of this Notebook is to show the students what they can do with their fir.
        """

        """The print statement writes output from the program."""
        print("Hello World")
```

Hello World

```
In [1]: """If you use quotes in text they have to be escaped with the \ character"""
        text = "Editing"

        print("Hello \"You\"...")
        print("Testing Python!")
        print(text+" the notebook!")
```

Hello "You"...

Testing Python!

Editing the notebook!

```
In [8]: """We can use spechial characters to show a line break or a tab"""

        """The \n key will move the text to a new line"""
        print("Line 1\nLine 2")
```

```
"""\r Is the return character. Note how Line1 is not printed. The return character rem
print("Line1\rLine2")
```

```
"""\t Is the tab character"""
print("Start\tTabbed Text")
```

Line 1

Line 2

Line2

Start            Tabbed Text

```
In [11]: """We can use the + sign to add strings together"""
```

```
print("String 1"+" | "+"String 2")
```

String 1 | String 2

```
In [14]: """
```

```
A Variable is used to hold a value.
```

```
REview the following prices:
```

```
"""
```

```
bread = 25
butter = 30
bacon = 25
cheese = 50
```

```
print("A Bread costs:", bread)
```

```
print("If i buy bread and cheese they cost:", cheese+bread)
```

A Bread costs: 25

If i buy bread and cheese they cost: 75

```
In [17]: """
```

```
Variables is similar to how x and y works in mathematics.
```

```
"""
```

```
x=0
y=0
b=0
```

```
print(x+y-b==5) #0 is not equal to 5.
```

False

```
In [18]: x=7
```

```
y=1
```

```
b=3
```

```
print(x+y-b==5) # 5 is equal to 5.
```

True

```
In [20]: """  
         Variables can also hold strings.  
         They operate in the same manner as strings.  
         This means that we can combine them like earlier.  
         """  
         name = "Alexander"  
         message = "Hello "+name+"!"  
  
         print(message)
```

Hello Alexander!

```
In [43]: """Multi initalizing of variables"""  
  
         one,two,tree = 1,2,3 #assigns 1,2 and 3 to the variables before the = sign  
         print(one,two,tree)  
  
         print("-"*5) #-----  
  
         five=one_pluss_four=two_point_five_times_two = 5 # We can assing all of the variables  
         print(five,one_pluss_four,two_point_five_times_two)
```

```
1 2 3  
-----  
5 5 5
```

```
In [44]: """Some names we cant use!"""  
         import keyword  
  
         #Dont Panic!  
         [print(i,n,z) for i,n,z in zip(keyword.kwlist[:3],keyword.kwlist[1:3],keyword.kwlist  
         #its just there to show the words.  
  
         print("-"*20) #-----  
  
         while_True = True #will work dough  
         print(while_True)
```

False None True  
and as assert

```

async await break
class continue def
del elif else
except finally for
from global if
import in is
lambda nonlocal not
or pass raise
return try while
-----
True

```

```

In [3]: """
        Errors!
        =====
        .. note:: We can use Exceptions to raise errors in our code.
        .. warning:: Raising an error will halt execution.
        """

```

```

raise Exception("Epic Error!")

```

```

-----

Exception                                Traceback (most recent call last)

<ipython-input-3-bb33b18183bd> in <module>()
      3 """
      4
----> 5 raise Exception("Epic Error!")

Exception: Epic Error!

```

```

In [4]: """
        Python will raise errors if we do something unexpected.
        """

```

```

print("Hello!")

```

```

File "<ipython-input-4-8a6c106e30ba>", line 5
print("Hello!")
      ^
SyntaxError: EOL while scanning string literal

```

```
In [5]: """
        Python will raise errors if we do something unexpected.
        """
        print("1"+1)
```

---

```
TypeError                                Traceback (most recent call last)
```

```
<ipython-input-5-fe78f2a44679> in <module>()
----> 1 print("1"+1)
```

```
TypeError: can only concatenate str (not "int") to str
```