



Pythoncursus

week 3

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Samenvatting huiswerk

- `if`, `else`, `elif`
- `and`, `or`, `not`
- functies definiëren
 - argumenten
 - return-waarden
- scope: globaal en lokaal
- `_` en `None`

Predicaatlogica: waarheidstabellen

or		
x	y	x or y
0	0	0
0	1	1
1	0	1
1	1	1

and		
x	y	x and y
0	0	0
0	1	0
1	0	0
1	1	1

not	
x	not x
0	1
1	0

combinations			
x	y	not y	x or not y
0	0	1	1
0	1	0	0
1	0	1	1
1	1	0	1

logical equality			
x	y	not x and not y	not (x or y)
0	0	1	1
0	1	0	0
1	0	0	0
1	1	0	0

probeer booleaanse logica in je code zo simpel mogelijk te formuleren!

not (x or y) and not z
not (x or y or z)

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Een voorbeeld van een functie

```
from fractions import gcd
```

```
def simplify(a, b):  
    deler = gcd(a, b)  
    return (a // deler, b // deler)
```

```
simple = simplify(1081, 483)
```

```
print(a, '/', b, '=', simple[0], '/', simple[1])
```

Funcities: complexer

```
def input_name():
    return input("Please enter a name: ")

def input_age():
    return input("Please enter an age: ")

def input_person():
    return input_name(), input_age()

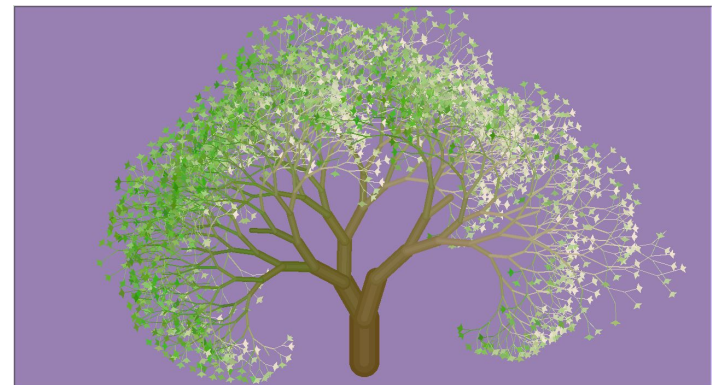
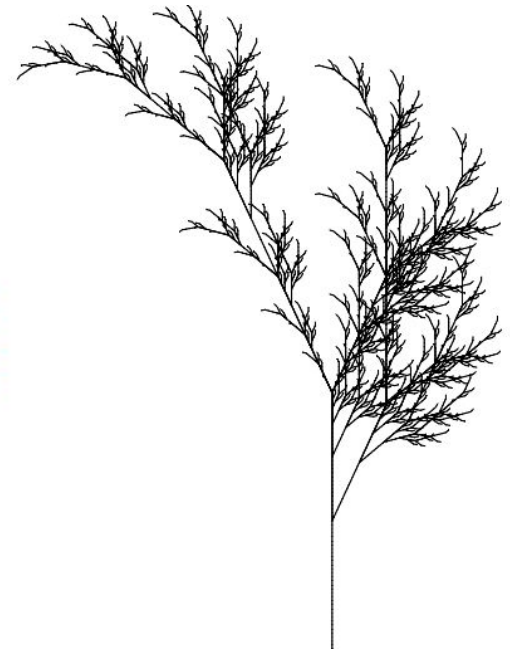
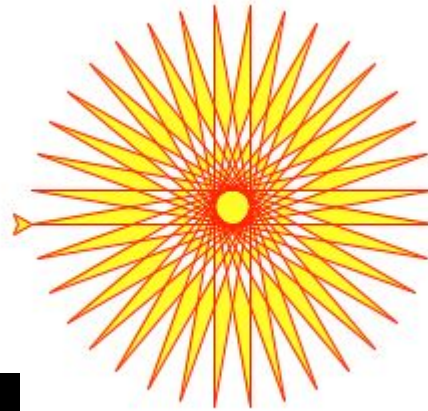
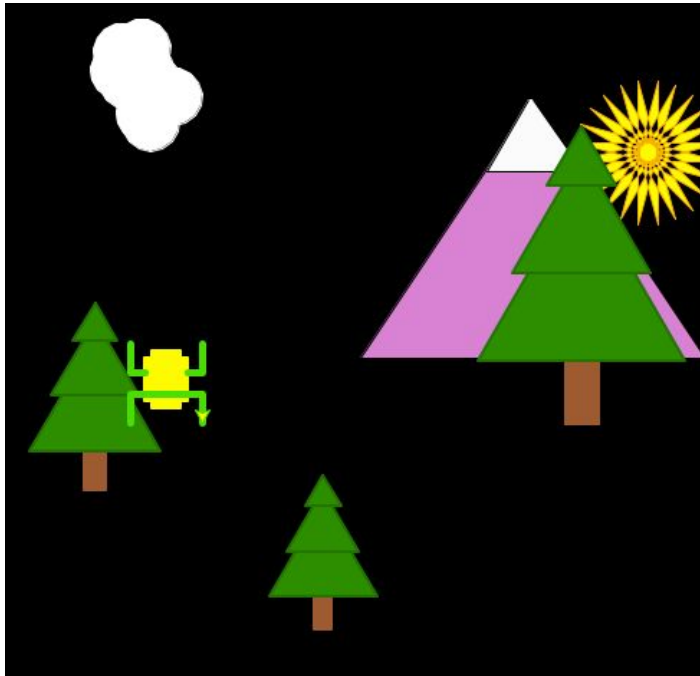
def fill_people():
    n = int(input("How many people do you want to enter? "))
    return [input_person() for _ in range(n)]

def find(name, people):
    for person in people:
        if person[0] == name:
            return person

def age_of(people):
    name = input_name()
    print("The age of " + name + " is " + find(name, people)[1])

people = fill_people()
print("Now you can enter people's names to find their age.")
while True:
    age_of(people)
```

Turtlegraphics



Forward 20 steps! Now turn
right, by 45 degrees! Now
go back 40 steps! Turn
right, 90 degrees!



Turtlegraphics voorbeeld

```
import turtle
```

```
turtle.pendown()  
turtle.forward(50)  
turtle.right(90)  
turtle.forward(50)  
turtle.right(90)  
turtle.forward(50)  
turtle.right(90)  
turtle.forward(50)  
turtle.done()
```

```
import turtle
```

```
def square(size, color):  
    turtle.pencolor(color)  
    turtle.pendown()  
    for i in range(4):  
        turtle.forward(size)  
        turtle.right(90)  
  
square(50, 'red')  
turtle.done()
```