

PYTHON(1)

simple programming

```
print "hello world"
```

```
name = "fred"
print name
```

```
print "hello " + name + " how are you?"
```

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COMMENTS

2

```
# this is a comment
# it allows you to leave reminders
# on how the program works

print "hello" # this is also a comment
print "bye"   # the computer ignores comments
```

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VARIABLES (OF TYPE STRING)

3

```
firstname = "fred"
surname = "jones"
fullname = firstname + " " + surname
greeting = "hello "
greeting += fullname
print greeting
```

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VARIABLES (OF TYPE NUMBER)**4**

```
secsInMin = 60
minsInHr = 60
hrsInDay = 24
secsInDay = secsInMin * minsInHr * hrsInDay
print secsInDay
```

INPUT**5**

```
name = raw_input("what is your name?")
print "hello " + name

age = int(raw_input("how old are you?"))
print "next year you will be " + str(age+1)
```

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ARITHMETIC**6**

```
a=1.3
b=2.7
c=a+b
print c
c=a-b
print c
c=a*b
print c
c=a/b
print c
```

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IF**7**

```
age=10
if age > 16:
    print "you have left school"
```

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CONDITIONS**8**

```
a=1
if a==1:
    print "equal"
if a!=1:
    print "not equal"
if a<1:
    print "less"
if a>1:
    print "greater"
if a<=1:
    print "less or equal"
if a>=1:
    print "greater or equal"
```

IF ELSE**9**

```
age=10
if age>16:
    print "you can drive a car"
else:
    print "you are not old enough"
```

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IF ELIF ELSE**10**

```
age=10
if age<5:
    print "you are at nursery"
elif age<7:
    print "you are at infants"
elif age<10:
    print "you are at juniors"
elif age<17:
    print "you are at secondary school"
else:
    print "you have left school"
```

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AND/OR CONDITIONS**11**

```
a=1
b=2
if a>0 and b>0:
    print "both are non zero"

if a>0 or b>0:
    print "at least one of them is non zero"
```

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FOR**12**

```

name="fred"
for ch in name:
    print ch

total=20
for n in range(total):
    print n

for n in range(1,20):
    print n

```

WHILE**13**

```

# beans on a chessboard
# put 1 bean on first square
# put 2 beans on second square
# put 4 beans on third square
# how long before you have 1000 beans?
squares=0
beans=1
total=0
while total<1000:
    total += beans
    beans *= 2
    squares += 1
print "it takes " + str(squares)

```

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FUNCTIONS (WITHOUT PARAMETERS) 14

```

def myname():
    print "my name is fred"

myname()
myname()
myname()

```

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FUNCTIONS (WITH PARAMETERS) 15

```

def showname(name):
    print "my name is " + name

def info(name, age):
    print "my name is " + name
    print "my age is " + str(age)

showname("fred")
showname("harry")

info("fred", 10)
info("harry", 20)

```

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FUNCTIONS (WITH RETURN)

16

```
def square(n):
    return n*n

print square(5)
print square(10)
a=100
print square(a)
print square(a+10)
b=square(a)
print b
```

BOOLEAN (TRUE/FALSE)

17

```
again = True
while again:
    print "hello"

    answer = raw_input("another go?")
    if answer != "Yes" and answer != "yes":
        again = False

print "thinking..."
if again:
    print "have another go"
```

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RESOURCES

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<http://docs.python.org/2/>
<http://docs.python.org/3/>

<http://docs.python.org/2/library/idle.html>
<http://docs.python.org/3/library/idle.html>

<http://www.codecademy.com/tracks/python>
<http://code.activestate.com/recipes/langs/python/>

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MORE FLASHCARDS

<http://blog.whaleygeek.co.uk>

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