

Writing Useful Functions

Day 13 – PH 365


13 Nov 2024

Announcements

- Project grading – should be done in the next day or two
- Extra help on coding – Vincent is offering semi-structured help time until 4pm after class ends
- Today, document your errors


Reviewing Functions – Syntax

```
def function_name(input1, input2):  
    indented code  
    return some_value
```



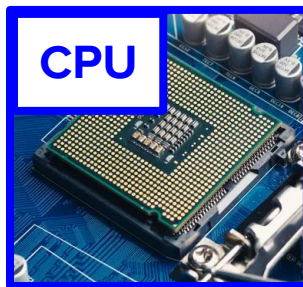
Function definition


```
new_value = function_name(5, 2.3)
```



Function call

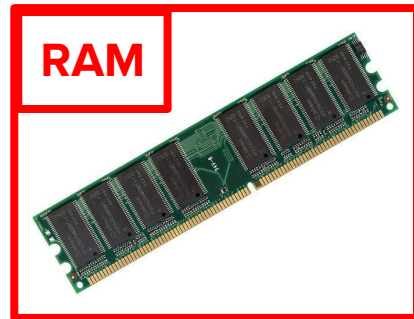
Reviewing Functions – Computer Usage



Defining a function:

```
def function_name(arg1, arg2):  
    indented code  
    return some_value
```

`function_name`
becomes a variable.



`function_name`'s
code is stored, but has
not been run yet.

Calling a function:

```
new_value = function_name(5, 2.3)
```

`function_name`'s code is
executed using `arg1=5` and
`arg2=2.3`; `new_value`
becomes a variable.

`new_value` takes on the
value that gets returned
from `function_name`
after being executed.

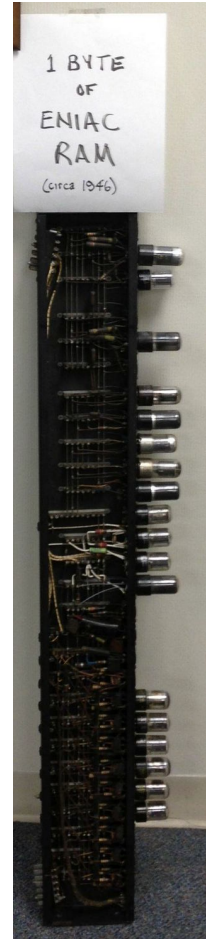
History of Functions

Kay McNulty – ENIAC programmer

John Mauchly – physicist

Invented functions or “**callable units**” for use in ENIAC

Functions saved memory by embedding many computational possibilities into one chunk of code



Remember

Document your errors today!

See Task 0.1 for link.