

An Introduction to STEM Programming with Python 3 – Chapter 8 Creating a main() Definition

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In this video we will cover:

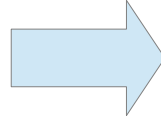
- ✓ Creating a main() definition
- ✓ Calling main()
- ✓ Why we would want to do this
 - Variable scoping

The "main()" Function

- In lots of languages (c, c++, Java) all programs have a function/def called "main()"
- The main def is a way to separate your start up code from the rest of the program
- After you create your "def main():"
 - Be sure to call it.

Main

```
1 def foo():  
2     print("foo")  
3  
4 def main():  
5     for i in range(10):  
6         foo()  
7  
8 main()
```



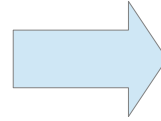
```
foo  
foo  
foo  
foo  
foo  
foo  
foo  
foo  
foo  
foo
```

Variable Scope

- Variables created outside a "def" are visible inside
 - Sometimes galled "global" variables
 - Mutable "global" variables can also be changed
- Variables created inside one "def"
 - Are local to the def
 - Are not visible to other defs
- It is recommended that you don't use "global" variables in your programs.

Variable Scope

```
1 def foo():
2     l.append(i)
3
4 def main():
5     for i in range(10):
6         foo()
7     print(l)
8
9 i = 99
10 l = []
11 main()
```



```
[99, 99, 99, 99, 99, 99, 99,
99, 99, 99]
```

Thank you

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