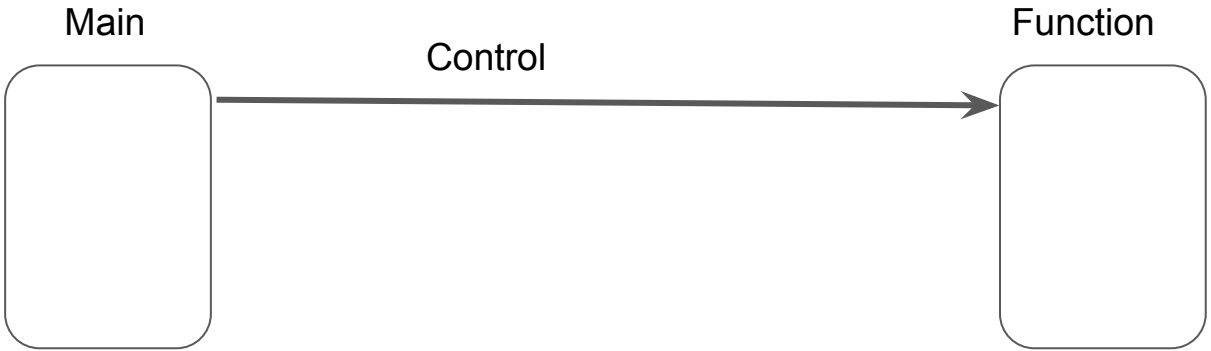
FN.5 - FN.11

Calling a function

Calling a function



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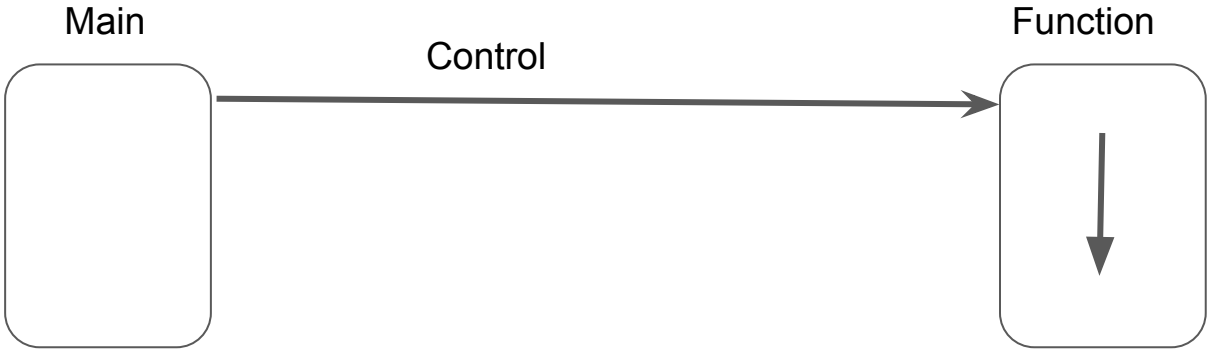

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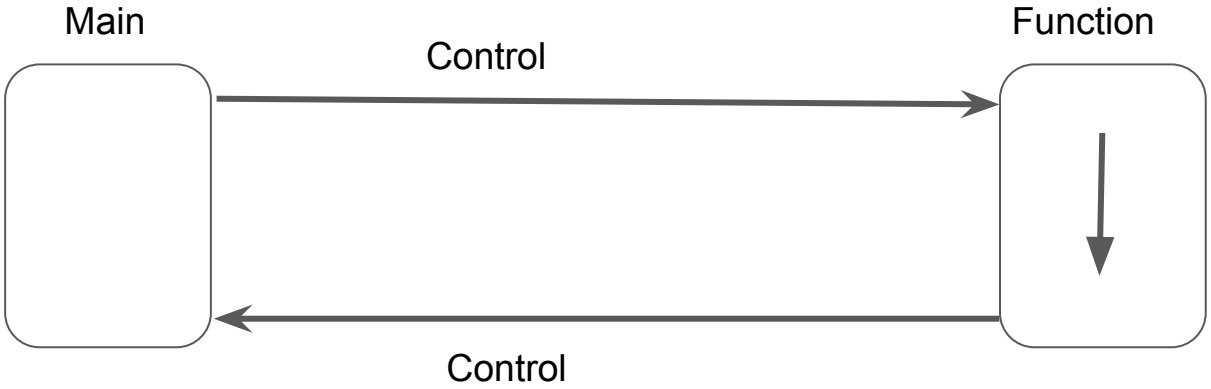

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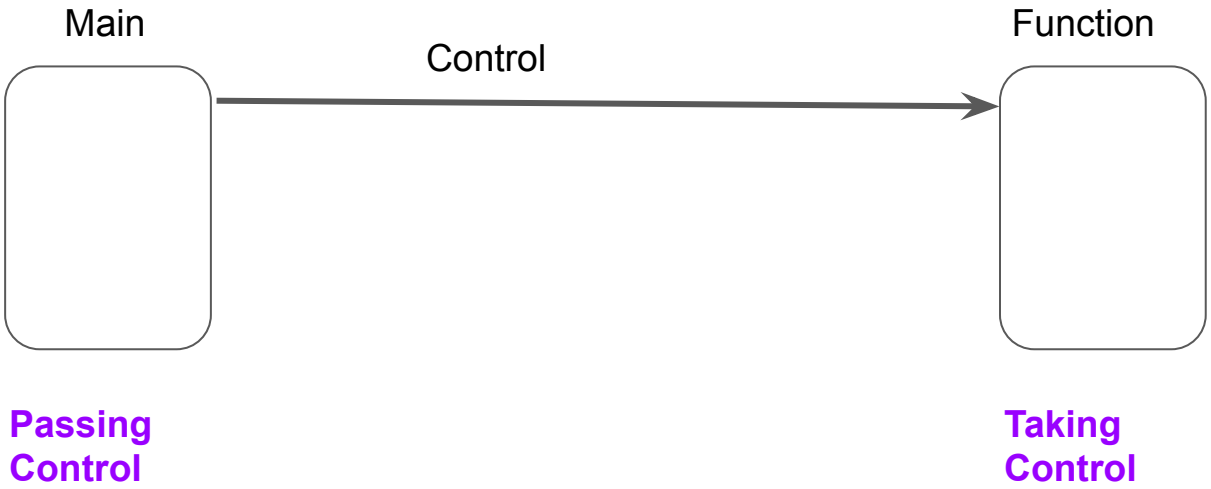

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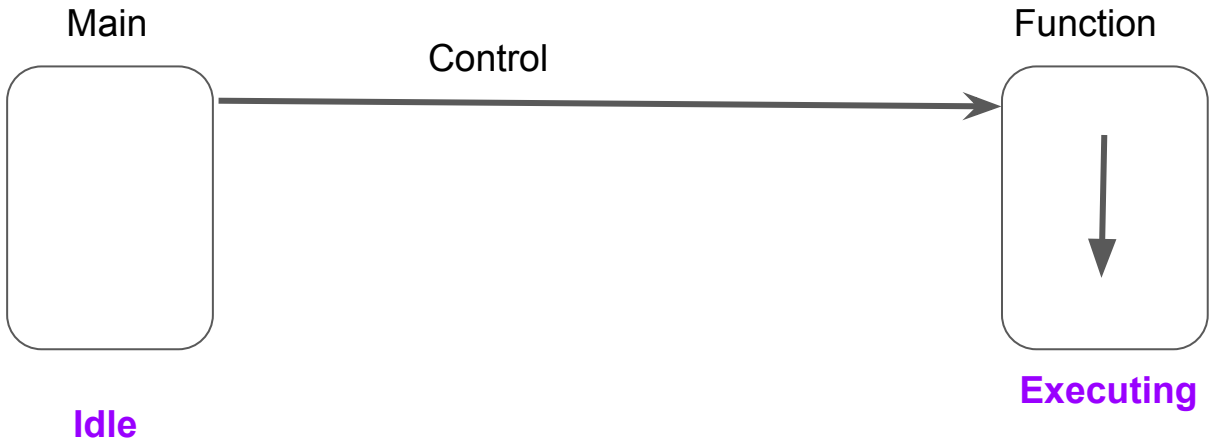

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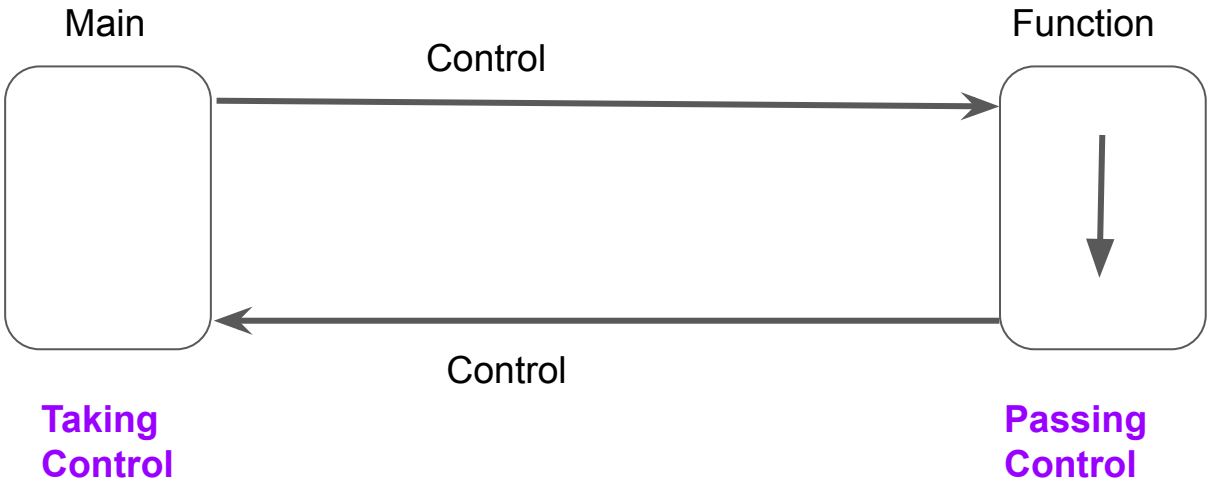

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But what about data being passed back and forth?

Depending on data movement, there are 4 different ways to structure a function.

No data in, no data returned

No data in, no data returned

```
def menu():
    print("Here are the options for your chosen action:")
    print("-- a -- to add a new item to the inventory")
    print("-- u -- to update the inventory of a item”)
    print("-- r -- to 'remove' inventory of an item as a result of a sale")
    print("-- v -- to compute the value of all the inventory in the store")
    print("-- o -- to print out all items that need reordering")
    print("-- q -- to quit the program\n")
    return
```

No data in, no data returned

```
def main( ):
        menu( )
        print(“OK”)

main( )
```

```
def menu( ):
        print("Here are the options for your chosen action:")
        print("-- a -- to add a new item to the inventory")
        print("-- u -- to update the inventory of a item”)
        print("-- r -- to 'remove' inventory of an item as a result of a sale")
        print("-- v -- to compute the value of all the inventory in the store")
        print("-- o -- to print out all items that need reordering")
        print("-- q -- to quit the program\n")
        return
```

Data in, no data returned

```
def prettyPrint(item, quantity, price):
      print( “In inventory we have”, quantity, “ of $”, item)
      print( “They sell for ”, price, “ each  for a total
              value of ”, quantity * price)
      return



def main( ):
      prettyPrint(“no-name laptop”, 25, 750)

main( )
```

No data in, data returned

```
def userOption( ):
        print("Here are the options for your chosen action:")
        print("-- a -- to add a new item to the inventory")
        print("-- u -- to update the inventory of a item”)
        print("-- r -- to 'remove' inventory of an item as a result of a sale")
        print("-- v -- to compute the value of all the inventory in the store")
        print("-- o -- to print out all items that need reordering")
        print("-- q -- to quit the program\n")
        choice = input("Please enter your action")
       return choice
```

No data in, data returned

```
def main( ):
    action = userOption( )
    print(action)

main( )
```

```
def userOption( ):
    print("Here are the options for your chosen action:")
    print("-- a -- to add a new item to the inventory")
    print("-- u -- to update the inventory of a item”)
    print("-- r -- to 'remove' inventory of an item as a result of a sale")
    print("-- v -- to compute the value of all the inventory in the store")
    print("-- o -- to print out all items that need reordering")
    print("-- q -- to quit the program\n")
    choice = input("Please enter your action")
   return choice
```

Data in, data returned

```
def value(quantity, price):
    return quantity * price


def main( ):
    quantity = 25
    item = “no name laptop”
    price = 750
    print( “In inventory we have ”, quantity, “ of ”, item)
    print( “They sell for ”, price, “ each  for a total value of $”, value(quantity, price))

main( )
```

Summary

When writing your own functions, consider the following:

1. what part of the program's "job" can be compartmentalized into a function?
2. does the function need to receive any data in order to do its job?
    a. if so, exactly what data does it need?
3. does the calling program need to receive any results from the function?
    a. if so, how will those results be used by the calling program?

Answer these questions and think about the control and data flow ***before*** you start to code!!!