Variables and Assignment

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
```

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
```

Name	Value

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
```

Name	Value
harry	"under the cabinet"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
```

Name	Value
harry	"under the cabinet"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
```

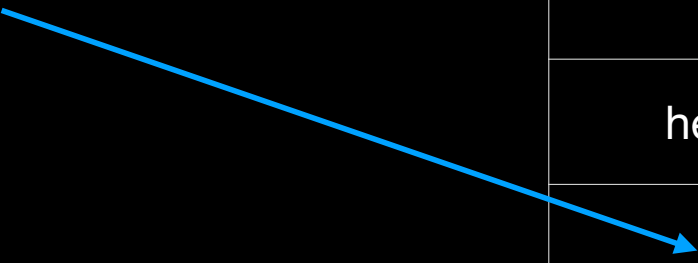| Name	Value
harry	"under the cabinet"
hermione	"muggle parents"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"

Variables and Assignment
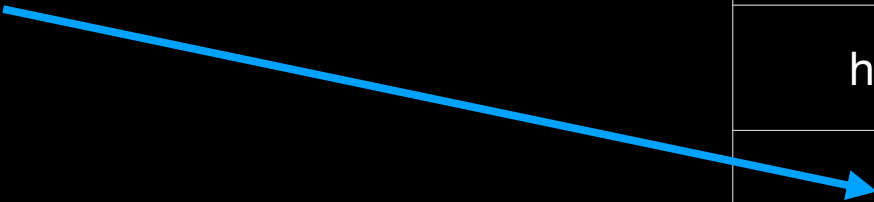
```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = "big family"
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron
```
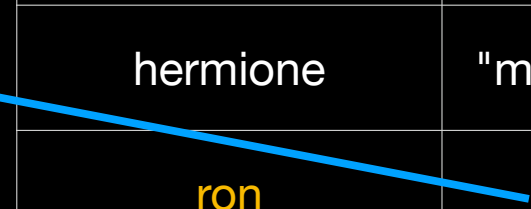
Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"

ginny = ron
ron = "big family"
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"

ginny = ron
ron = "big family"
```

No definition of ron in the table
Undefined name error

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
```

Name	Value
harry	"under the cabinet"
hermione	"muggle parents"
ron	"big family"
ginny	"big family"
harry	10

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
```

Name	Value
harry	10
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1
```

Name	Value
harry	10
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1
```

Figure out the value of the right side

Name	Value
harry	10
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1
```

Name	Value
harry	10
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = 10 + 1
```

Name	Value
harry	10
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = 11
```

Name	Value
harry	10
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = 11
```

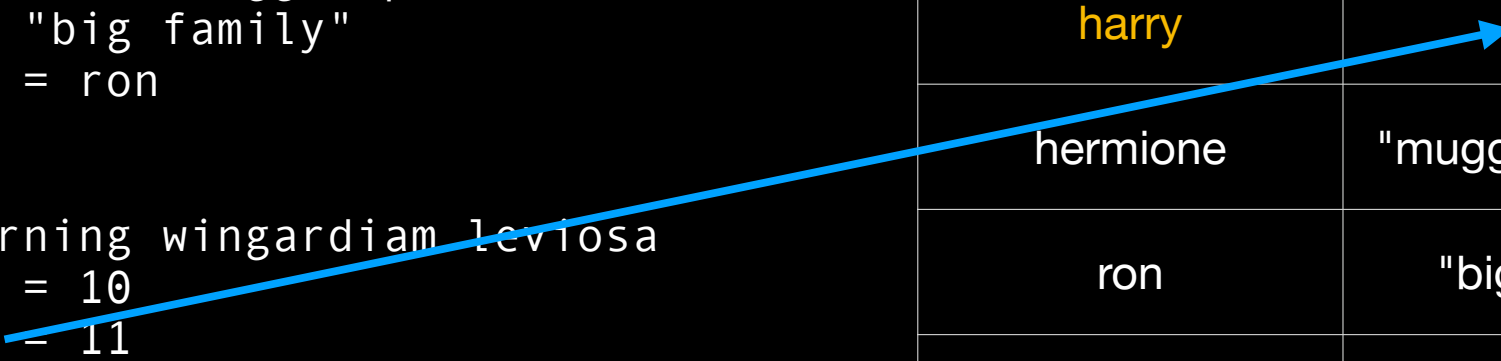| Name	Value
harry	11
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1
```

Name	Value
harry	11
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
```

Name	Value
harry	11
hermione	"muggle parents"
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
```

Name	Value
harry	11
hermione	1
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = 11 - 2
```

Name	Value
harry	11
hermione	1
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = 9
```

Name	Value
harry	11
hermione	1
ron	"big family"
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = 9
```

Name	Value
harry	11
hermione	1
ron	9
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
```

Name	Value
harry	11
hermione	1
ron	9
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1
```

Name	Value
harry	11
hermione	1
ron	9
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = 1 + 1
```

Name	Value
harry	11
hermione	1
ron	9
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = 2
```

Name	Value
harry	11
hermione	1
ron	9
ginny	"big family"

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = harry + hermione + ron + ginny
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = harry + hermione + ron + ginny
        11
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = harry + hermione + ron + ginny
        11          1
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = harry + hermione + ron + ginny
         11         1         9
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = ~~harry~~ + ~~hermione~~ + ~~ron~~ + ~~ginny~~
          11          1          9        2
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = 23
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = harry + hermione + ron + ginny
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2
total	23

Variables and Assignment

```
# Basic assignment
harry = "under the cabinet"
hermione = "muggle parents"
ron = "big family"
ginny = ron


# learning wingardiam leviosa
harry = 10
harry = harry + 1

hermione = 1
ron = harry - 2
ginny = hermione + 1

total = harry + hermione + ron + ginny
print(total) # prints 23
```

Name	Value
harry	11
hermione	1
ron	9
ginny	2
total	23

Variables and Assignment

Concepts

Variables and Assignment

Concepts

Code executes in a linear order

Variables and Assignment

Concepts

Code executes in a linear order

Assignment associates a value with a name

Variables and Assignment

Concepts

Code executes in a linear order

Assignment associates a value with a name

Assigning a value to a new name creates a new association

Variables and Assignment

Concepts

Code executes in a linear order

Assignment associates a value with a name

Assigning a value to a new name creates a new association

Assigning a value to an existing name updates the association

Variables and Assignment

Concepts

Code executes in a linear order

Assignment associates a value with a name

Assigning a value to a new name creates a new association

Assigning a value to an existing name updates the association

The right side of an assignment is evaluated first

Variables and Assignment

Concepts

Code executes in a linear order

Assignment associates a value with a name

Assigning a value to a new name creates a new association

Assigning a value to an existing name updates the association

The right side of an assignment is evaluated first

The value of the right side is copied into the location
associated with the name on the left side