

# Python 2 Worksheet: Variables, Input and Casting

Student Resource



Python Worksheet 2 - Variables Input and Casting.docx



Python Worksheet 2 - Variables Input and Casting.pdf

## Activity 1: Investigate

Try this code and write in the output.

```
a = "Fred"
b = "is"
c = 25

# What does each command do?
print(a, b, c)
print("Goodbye", a)
print(a, b, c, ".")
```

What does each command do?

Code	Output
<code>print(a, b, c)</code>	
<code>print("Goodbye", a)</code>	
<code>print(a, b, c, ".")</code>	

## Activity 2: Variable naming rules and conventions

Complete this table:

Variable name example	Okay?	Explanation
high_score		
x		
Surname		
third.place		
the_highest_value_scored		

## Activity 3: Printing variables

### Stage 1: Predict

Look at the examples below and write down what you predict they will output. Do not run them yet.

```
name = input("What is your name? ")
print("Hello", name)
```

Prediction:

---

```
hobby = input("What is your favourite hobby? ")
print(name, "likes", hobby)
```

Prediction:

---

```
country = input("Enter a country name ")
print("I'd like to visit", country)
```

Prediction:

---

### Stage 2: Run

Now run the code. Did it output what you expected?

```
name = input("What is your name? ")
print("Hello", name)
```

Actual output:

---

```
hobby = input("What is your favourite hobby? ")
print(name, "likes", hobby)
```

Actual output:

---

```
country = input("Enter a country name ")
print("I'd like to visit", country)
```

Actual output:

---

### Stage 3: Investigate

Now try these examples. What is the output now and why?

1

```
print("Hello", name)
name = input("What is your name? ")
```

Actual output:

---

2

```
name = input("What is your name? ")
input("What is your favourite hobby? ")
print(name, "likes", hobby)
```

Actual output:

---

3

```
COUNTRY = input("Enter a country name ")
print("I'd like to visit", country)
```

Actual output:

---

#### Stage 4: Modify

Change this so it asks the user for the name of a game and their high score instead

Change the print statements appropriately.

```
name = input("What is your name? ")
print("Hello", name)

hobby = input("What is your favourite hobby? ")
print(name, "likes", hobby)
```

Your answer:

### Stage 5: Make

Using this code as a guide, write a program that asks the user for the name of their favourite animal, where it lives and its favourite food

Then output a message about this.

```
name = input("What is your name? ")
print("Hello", name)

hobby = input("What is your favourite hobby? ")
print(name, "likes", hobby)
```

Your answer:

## Activity 4: Casting

**What is output by this code?**

```
first = input("Enter a number ")
second = input("Enter another number ")
print(first, "+", second, "is", first + second)
```

Your answer:

Your explanation:

## Activity 5: Casting Exercises

**1. Contrary to popular belief, millipedes don't have 1000 legs. Giant African millipedes have around 160 legs.**

Complete this code to output how many legs your millipedes have.

```
count = ?
answer = ? * 160
print("That is", answer, "legs!")
```

Answer:

**2. Ask the user how tall they are in centimetres and output their height in metres.**

```
height = float(?)  
answer = ?  
print(?)
```

Answer:

**3. To convert degrees Celsius to Fahrenheit, you multiply by 1.8 and add 32.**

Fix this code to ask the user to enter a temperature in Celsius as a floating point number and output the temperature in Fahrenheit.

```
celsuis = ?  
fahrenheit = ?  
print("That is", round(fahrenheit, 2), "F")
```

Answer: