

Topic 2: Variables and Expressions

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Tues, Aug 24 2021

Announcements

Things that are due tommorow night:

- Homework 2
- zyBooks Participation for Topic 2 (Part 2)
- Post-reading for Topic 2 (Part 2)

Review Polls

Poll Question: Whitespace

Which of the following are considered 'whitespace'?

- ① Spaces
- ② Tabs
- ③ Newlines
- ④ Spaces and Tabs
- ⑤ Spaces, Tabs, and Newlines

Poll Question: Whitespace

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Whitespace is any character that takes up vertical or horizontal space but does not produce an otherwise visible mark.

Topic Review: Escape Character

- ① Treat backslash(\) as a special character
- ② \ means that the character *immediately* following it should be treated differently.
 - ① \' and \" escape quotes within a string.
 - ② \t encodes a tab.
 - ③ \n encodes a new line.
 - ④ \\ encodes a slash.

Objects and Mutability

Objects and Mutability

- **Name binding** → Process of associating the variable name with the object.
- When instantiated each object gets an id.
- To check the id of an object call the `id` function and pass the variable name that references the object.

Floating Points

Poll Question:

What is printed to the screen when the user types in 1.

```
x = input()  
y = float(x)  
print(y)
```

- ☐ A 1
- ☐ B 1.0
- ☐ C ValueError
- ☐ D Other error

Poll Question

What will the output be if the user types in 4.5 then 1?

```
x = int(input())  
y = int(input())  
z = x + y  
print(z)
```

- ① 5.5
- ② 6.0
- ③ ValueError
- ④ 6

Poll Question:

What is the result of running the following code when the user types in 4.5 and 1?

```
x = int(float(input()))  
y = float(input())  
z = x + y  
print(z)
```

- ① 5
- ② 5.0
- ③ 5.5
- ④ 6.0

Poll Question: Printing Floating Points

If the user types in 2.7182818284 which of the following string formatting function calls will produce 2.718 when replacing it with the triple question marks?

```
x = float(input())  
print(???)
```

- ❶ "{:.3f}".format(x)
- ❷ "{.3f}".format(x)
- ❸ "{:.5f}".format(x)
- ❹ format("{:.3f}", x)
- ❺ "{:.4f}".format(x)

Poll Question: Python Literals

Which of the following is not a valid Python literal?

- ☐ A 1.00001
- ☐ B 1E-7
- ☐ C 1,097
- ☐ D -3.00
- ☐ E `'\,'\''`

Variables

Poll Question: Python Naming

Which are legal python names?

- ----
- 12monkeys
- testing123

- ☐ A 1 and 2
- ☐ B 1 and 3
- ☐ C 2 only
- ☐ D 1, 2, and 3

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