

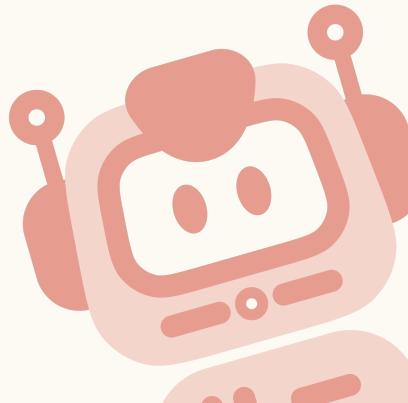
Lesson 4

Variables and Remembering What the User Typed



Previously, on Code for Schools...

What is the name of the module we need to import in order to display **colours** on the screen?



Previously, on Code for Schools...

What would:

```
print(Style.bold + Colour.blue + "Red")
```

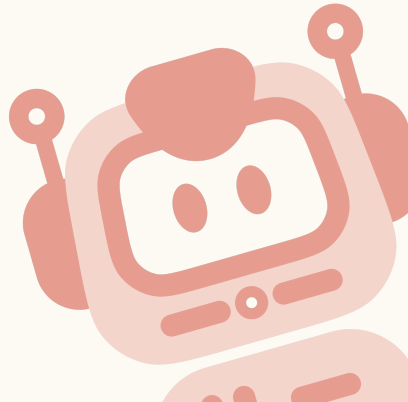
display on the screen?

A) **Red**

B) **Red**

C) **Blue**

D) **Red**



Previously, on Code for Schools...

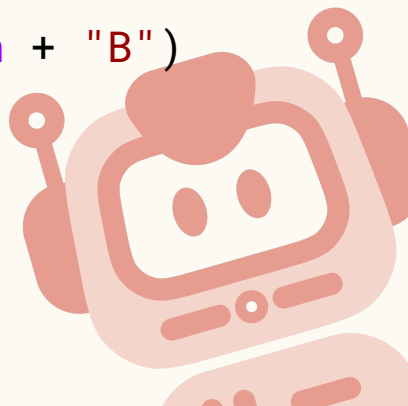
How would we display **AB** on the screen?

A) `print(red + "A" + blue + "B")`

B) `print("A" + Colour.red + "B" + Colour.blue + Highlight.cyan)`

C) `print("redAblueB")`

D) `print(Colour.red + "A" + Colour.blue + Highlight.cyan + "B")`

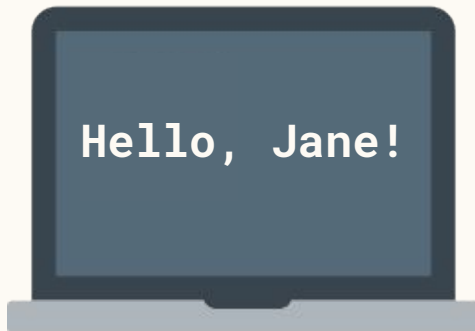


Learning objectives

By the end of this lesson:

- I can understand how variables are used to remember `input()` from the user
- I can use and display information that the user gives to my program

```
name = "Jane"  
country = "Australia"
```



Python Reference Sheet



Introductory Code for Schools Python Reference Sheet

Displaying Text on the Screen

```
print("Hello, world!")
```

Pausing Until the User Presses [ENTER] to Continue

```
input("Press [Enter] to continue")
```

Comments

```
# These are comments, everything after  
# the hash sign is ignored by Python.  
# These make your code easier to read.
```

Letting the User Enter Text, Displaying it to the Screen

```
name = input("Please enter your name:")  
  
print("Hi, " + name + ", how are you?")
```

Making a Decision with an if Statement

```
if name == "Joan":  
    print("My name is Joan too!")  
    print("Have a nice day!")  
  
# Note: "Have a nice day!" is always shown  
# because it is not part of the IF  
# code block
```

Not Equals with an if Statement

```
if name != "Tom":  
    print("Have you seen Tom, btw?")
```

Multiple if Statements

```
if name == "Joan":  
    print("My name is Joan too!")  
if name == "John":  
    print("My brother's name is John.")  
if name == "Hugo":  
    print("My best friend is called Hugo.")  
print("Bye now!")
```

Repeating Code (goto Loops)

```
label .ask_again  
password = input("Enter password:")  
if password != "letmein":  
    print("Incorrect, try again.")  
    goto .ask_again  
  
print("Welcome inside!")
```

Displaying Text in Colour (from goodies module)

```
from goodies import * # the goodies module  
                        # needed for colour  
  
print(Colour.red + "In red.")  
print(Colour.blue + "In blue.")  
print(Highlight.blue + "Blue highlight.")  
print(Highlight.cyan + "Cyan highlight.")  
print(Style.bold + "In bold.")  
print(Style.underline + "Underlined.")  
print(Colour.reset + "Back to normal.")  
print(Colour.red + Highlight.blue +  
      Style.bold + "Combined red text, blue  
      highlight and bolded!")
```

Make your code sleep

```
sleep(2) # sleep for 2 seconds  
print("I'm awake now!")
```

Colour and Style Guide (from goodies module)

Colour.brown	Highlight.brown
Colour.red	Highlight.red
Colour.orange	Highlight.orange
Colour.pink	Highlight.pink
Colour.yellow	Highlight.yellow
Colour.green	Highlight.green
Colour.cyan	Highlight.cyan
Colour.blue	Highlight.blue
Colour.purple	Highlight.purple
Colour.magenta	Highlight.magenta
Colour.white	Highlight.white
Colour.grey	Highlight.grey

Style.bold Style.underline Style.italics

Python Reference Sheet

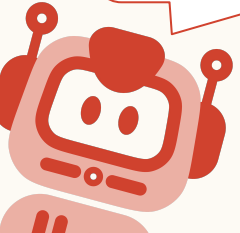
- Print it out, keep it handy and use it!
- [Get it here](#)

Demo 04.01: Story Time!

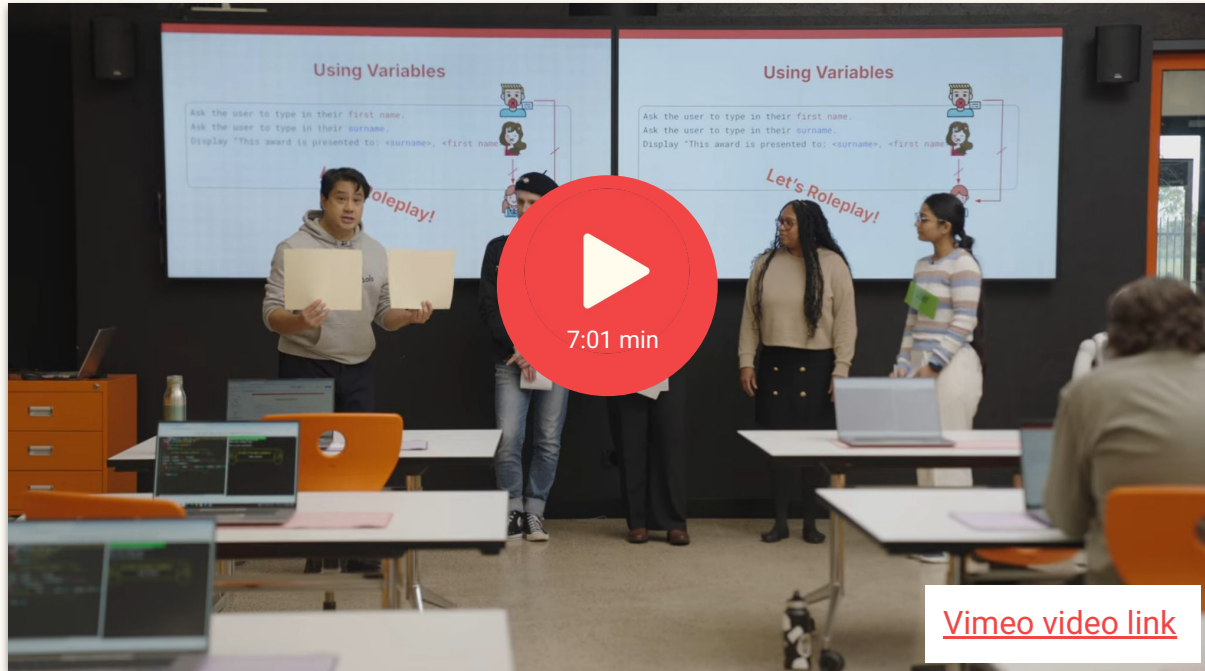


Can you add another sentence to the story?

[Click here to create your fantastic short story!](#)



Understanding Variables (Part 1)



[Link to Accompanying Slides](#)
([PDF](#), [powerpoint](#))

Understanding Variables (Part 2)



[Link to Accompanying Slides](#)
([PDF](#), [powerpoint](#))

Worksheet Activity - Question 1 & 2



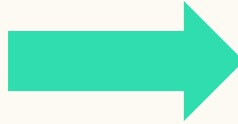
[Complete Questions 1 - 3](#)

([PDF](#), [MS Word](#))

Coding Activity: NetFlicks

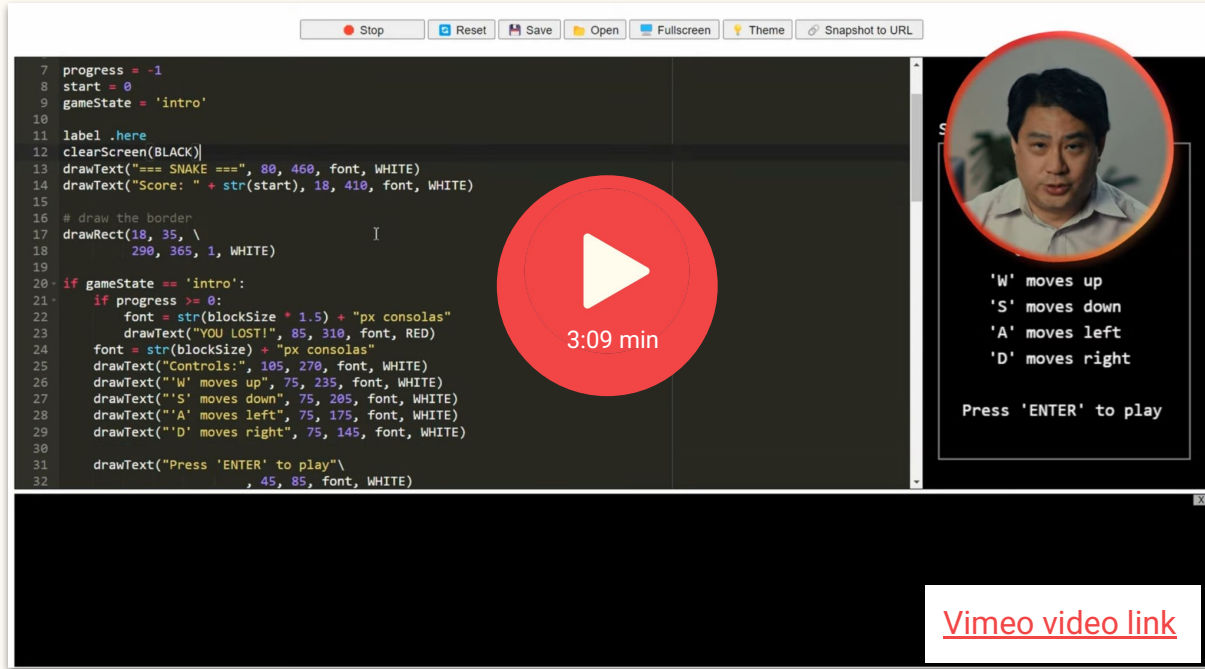


[Complete Question 4](#)
([PDF](#), [MS Word](#))



Activity 04.01
[NetFlicks](#)

Comments



Stop Reset Save Open Fullscreen Theme Snapshot to URL

```
7 progress = -1
8 start = 0
9 gameState = 'intro'
10
11 label .here
12 clearScreen(BLACK)
13 drawText("=== SNAKE ===", 80, 460, font, WHITE)
14 drawText("Score: " + str(start), 18, 410, font, WHITE)
15
16 # draw the border
17 drawRect(18, 35, \
18         290, 365, 1, WHITE)
19
20 if gameState == 'intro':
21     if progress >= 0:
22         font = str(blockSize * 1.5) + "px consolas"
23         drawText("YOU LOST!", 85, 310, font, RED)
24         font = str(blockSize) + "px consolas"
25         drawText("Controls:", 105, 270, font, WHITE)
26         drawText("'W' moves up", 75, 235, font, WHITE)
27         drawText("'S' moves down", 75, 205, font, WHITE)
28         drawText("'A' moves left", 75, 175, font, WHITE)
29         drawText("'D' moves right", 75, 145, font, WHITE)
30
31         drawText("Press 'ENTER' to play" \
32                 , 45, 85, font, WHITE)
```

3:09 min

'W' moves up
'S' moves down
'A' moves left
'D' moves right

Press 'ENTER' to play

[Vimeo video link](#)



[Link to Accompanying Slides](#)
(PDF, powerpoint)

Worksheet Activity - Question 5 & 6



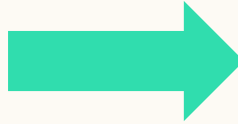
[Complete Question 5 - 6](#)

([PDF](#), [MS Word](#))

Coding Activity: My Top Fashion Shop



[Complete Question 7](#)
([PDF](#), [MS Word](#))



Activity 04.02
[My Top Fashion Shop](#)

Coding Activity: My Amazing Story



Activity 04.03

[My Amazing Story](#)

Coding Activity: Bouncy Text! (Extension)

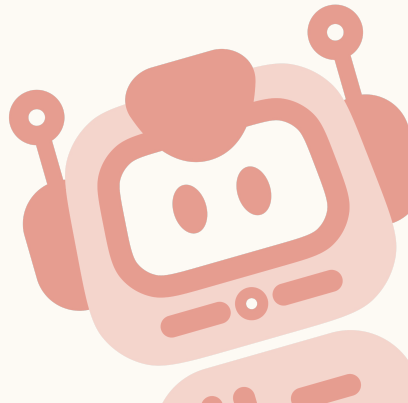


Activity 04.04

[Bouncy Text](#)

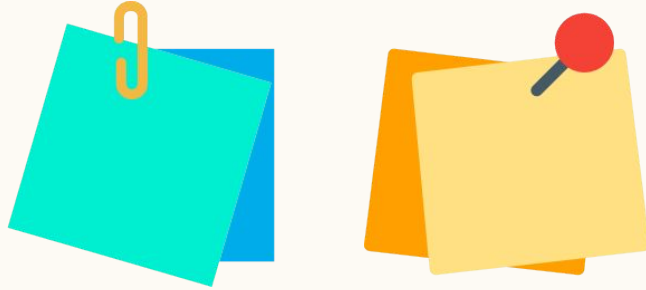
Review of Learning Objectives

- I can understand how variables are used to remember `input()` from the user
- I can use and display information that the user gives to my program



Reflection: Exit pass

- What is one new thing you learnt today?
- Write it on a sticky note and stick it on the board before you leave the classroom



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