

HKUST Future-Ready Scholars

Introduction to Game Programming using Python

Part 1: Number Guessing Game

20 April 2024



THE HONG KONG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY

Open a tab on your browser, then go to
<https://www.menti.com/>



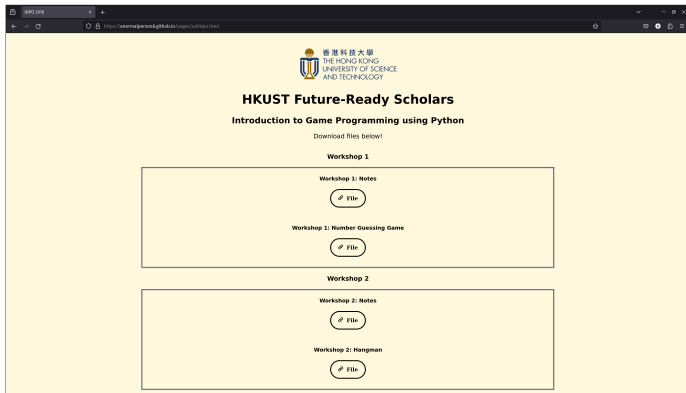
Number Guessing Game

Let's play the number guessing game.

Set-up your Gmail account.

Then head to
<https://colab.research.google.com/>

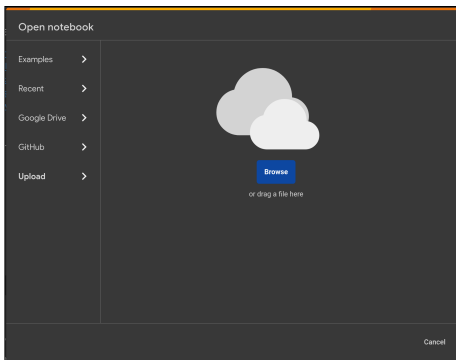
All materials today are at:
<https://bit.ly/ustidpo>



Download all files that belong to **Workshop 1** today.

Jupyter Notebook

Now upload your Jupyter Notebook file with **Files** → **Open Notebook**.



Upload the file **Number-Guessing.ipynb**.

Using Jupyter Notebook

You can type your code in these blocks. We call these blocks code cells.



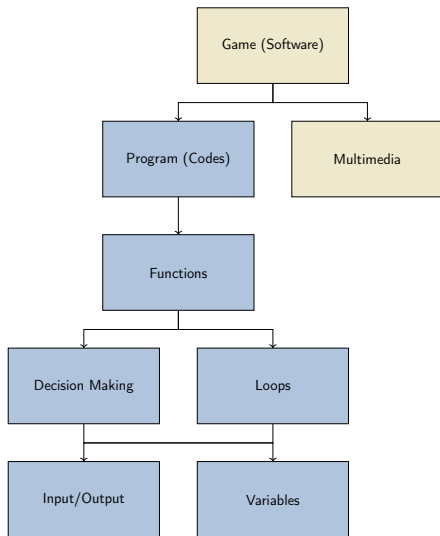
```
print("Mum I am in HKUST typing code in a code block")
```

You can run a code cell with the button on the left.



```
print("Hello World!") # Prints "Hello World!"
```

World of Game Coding



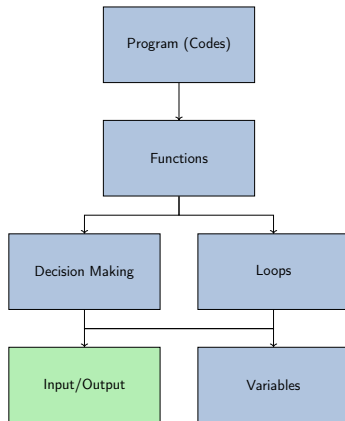
What is Python?

Did you know? Python was made by someone who was bored.
It's a language designed to be almost as understandable as English.
You will be using Python 3. Why? Because Python 1 and 2 are too old.



This is the logo of Python.

Contents



The first thing in Python - print() function

```
print("This is the print function.")
```

The first thing in Python - print() function

print() is a function that lets you print something, also known as text output.

```
print("Word") # This prints the word "Word".
```

Examples:

```
>>> print("Hello World")
```

Hello World

```
>>> print("Haha hehe")
```

Haha hehe

Printing multiple things

You can use a comma (,) to separate different things with a space.

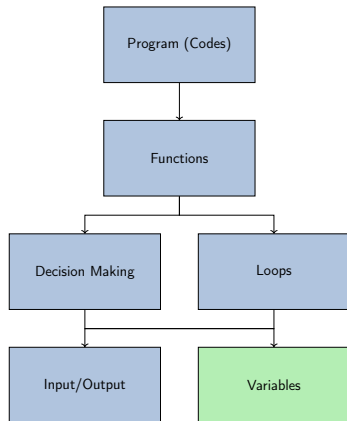
```
>>> print("Alpha", "Beta", "Gamma")
```

```
Alpha Beta Gamma
```

```
>>> print("Haha", "hehe")
```

```
Haha hehe
```

Contents



Imagine you borrow a box from the computer.



Imagine you borrow a box from the computer.



Give it a name and a value, you can now recall this value with the name!

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name `variable_name`.

Some basic variable types:

```
a = 5
```

Variables

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Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a  
b = True
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
b = True       # This is a boolean (bool) stored in b
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
b = True       # This is a boolean (bool) stored in b
c = 3.2
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
b = True       # This is a boolean (bool) stored in b
c = 3.2        # This is a float (float) stored in c
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5           # This is an integer (int) stored in a
b = True        # This is a boolean (bool) stored in b
c = 3.2         # This is a float (float) stored in c
d = "abc"
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
b = True       # This is a boolean (bool) stored in b
c = 3.2        # This is a float (float) stored in c
d = "abc"      # This is a string (str) stored in d
```


Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
b = True       # This is a boolean (bool) stored in b
c = 3.2        # This is a float (float) stored in c
d = "abc"      # This is a string (str) stored in d
e = 'abc'
```

Variables

The code usually goes:

```
variable_name = data
```

This means whatever data is, it is now stored in a variable with name variable_name.

Some basic variable types:

```
a = 5          # This is an integer (int) stored in a
b = True       # This is a boolean (bool) stored in b
c = 3.2        # This is a float (float) stored in c
d = "abc"      # This is a string (str) stored in d
e = 'abc'      # This is also a string stored in e
```

The End
Made in \LaTeX
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