

Knowledge Organiser

Spring 2 – Year 7 Coding

Key term	Definition
Hero	The main character controlled by the player, who executes code to complete levels and challenges
Syntax	The rules that define the structure of code in a programming language
Loop	A programming structure that repeats a block of code multiple times
Variable	A named container used to store data that can be used and changed in the program (e.g., <code>enemy = hero.findNearestEnemy()</code>).
Function	A reusable block of code that performs a specific task. Players often define their own functions to organize code.
Argument	A value passed into a function to customize its behaviour (e.g., <code>hero.moveXY(30, 40)</code>)
Object	A data structure that represents a game entity, such as an enemy, item, or hero, with properties and methods.
Method	A function that belongs to an object (e.g., <code>hero.attack(enemy)</code> is a method of the hero object).
Debugging	The process of finding and fixing errors in code.

CodeCombat is an educational video game to teach programming concepts and languages. We use it to learn Python.

In Python, a command typically refers to an instruction you give to the computer to perform an action. These are written as statements in your code and are executed line by line. Some examples of commands are print, input, len, while and many list commands.



IF Statements can be used to select different scripts of a program depending on a condition.

```

8 secretC = secretA and secretB
9 if secretC:
10     hero.moveXY(20, 33)
11 else:
12     hero.moveXY(20, 15)
13 hero.moveXY(26, 24)
14
  
```

Loops are used as a way of repeating instructions. Also known as iteration.

Variables hold data to use again in programs. Variables can be held as different data types.

There are 4 data types in python; string, float, integer and Boolean.

String for storing text

Integer for whole numbers

Float for decimal numbers

Boolean either true or false