

# [The = 4.0) ^^ character (a, f,](https://assignbuster.com/the-40-character-a-f/)

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The most commonlysupported data types in programming languages are:     \*^\*^\* Data can be eithernumbers, characters or logical \*^\*^\* Integer(whole number 4, 27, 65535)1 to 8 bytes Most programminglanguages have different data types for whole and real numbers. This is becausethey are represented differently inside the computer. Whole numbers, calledintegers (and ‘ int’ for short in various programming languages), arerepresented as single sets of binary numbers inside a computer. A variety of mathematicaloperations (e.

g. addition, multiplication and division) can be done to these asthey fall under the number data type. \*^\*^\* Floating point(decimal number 4. 2, 27. 4, 5. 63)4 to 8 bytes Any numbers which havedecimal points, called real or floating point numbers (and ‘ float’, ‘ single’,’double’, ‘ real’ or ‘ longreal’ in various other instances), are usuallyrepresented using floating point representation inside a computer. This iswhere the number is split into two parts: the main number (everything beforethe decimal point) and the fractional part (everything after the decimalpoint), both of which are binary numbers.

A variety of mathematicaloperations (e. g. addition, multiplication and division) can be done to theses asthey fall under the number data type.

\*\*\*Is this what is onthe BBC website??\*\*\*It is important to notethat adding two real numbers will always result in a floating point number (e. g1. 5 + 2. 5 = 4.

0) \*^\*^\* Character(a, F, 3, $, £, #)1 byte Data which is acharacter (or ‘ char’) can be any character from a specific character set, suchas ASCII or Unicode, represented by its own binary pattern. Characters can beletters, digits or punctuation marks, and even tabs or spaces. \*\*\*Operations?\*\*\* \*^\*^\* String(abc, hello world)Limited to the amountthat can be stored in main memory Ordered sequences ofmore than one character in length are called strings. These can be made of anycombination of either different or repeated characters. There is usually arestriction on the length of a string, which is how many characters itcontains, and empty strings – strings with no characters in them and thereforea length of 0 – are also possible. All keyboard input and text output is in theform of character strings. \*\*\*Operations?\*\*\* \*^\*^\*\*\*\*BOOLEAN\*\*\* Boolean(true or false)1 bit The Boolean data type isused for True or False values.

These are the only two states which are possiblefor this data type. Most programming languages will use the terms True andFalse for Boolean data but it is actually represented as 1 (True) or 0 (False)in a computer. This means it takes up only 1 bit of space.