

Difference between Keyword and Identifier in C

In C, it is impossible to think for a program definition without using keywords and identifiers as these are basically the fundamental parts of the language used. Identifiers are used to name a given variable, function or other entity while keywords are the reserved words that have predefined meaning in the language.

The below table illustrates the primary differences between the keywords and identifiers:

Parameters	Keywords	Identifiers
Definition	Keywords are predefined word that gets reserved for working program that have special meaning and cannot get used anywhere else.	Identifiers are the values used to define different programming items such as variables, integers, structures, unions and others and mostly have an alphabetic character.
Use	Specify the type/kind of entity.	Identify the name of a particular entity.
Rules of Definition	It always starts with a lowercase letter.	First character can be an uppercase, lowercase letter or underscore.
	A keyword should be in lower case and can only contain alphabetical characters.	An identifier can be in upper case or lower case and can consist of alphabetical characters, digits and underscores.
Purpose	They help to identify a specific property that exists within a computer language.	They help to locate the name of the entity that gets defined along with a keyword.
Examples	int, char, if, while, do, class etc.	Test, count1, high_speed, etc.

Keywords

A set of 32 keywords-in-c are specific reserved words each of which has a specific feature associated with it. These are the majority of words used to create and define several applications and programming for learners as well. All the 32 keywords in C are as under:

auto	break	case	char	const	continue	default	do
double	else	enum	extern	float	for	goto	if
int	long	register	return	short	signed	sizeof	static
struct	switch	typedef	union	unsigned	void	volatile	while

Identifiers

Identifiers are used as the general terminology for naming of variables, functions and arrays. These are user defined names consisting of arbitrarily long sequence of letters and digits with either a letter or the underscore (_) as a first character.

Naming Architecture

- Identifier names must differ in spelling and case from any keywords.
- **You cannot use keywords as identifiers; they are reserved for special use.**
- Once declared, you can use the identifier in later program statements to refer to the associated value.
- A special kind of identifier, called a statement label, can be used in goto statements.

Code Illustration

The below example illustrate the different purpose of the keywords and identifiers in C:

```
#include <stdio.h>

// 'main' is also an identifier
// although it is predefined
int main() {
    int age = 25;
}
```

int is a keyword and age is an identifier

main is also an identifier

```
printf("Age: %d\n", age);  
  
    ↗ Return is a keyword  
return 0;  
}
```

Output

Age: 25

Explanation: In the above contents, 'age' is used as an identifier as like 'main' is used to identify the actual area of execution. The type of variable used is integer where 'int' is a keyword used to store the integer data.

References:

- Contents taken from several online resources
- Meant for overall reading purpose
- Reference from "C in Depth" BPB publication.