Identifiers in C

Identifiers" or "symbols" are the names you supply for variables, types, functions, and labels in your program. Identifier names must differ in spelling and case from any keywords. You cannot use keywords (example int, char etc) as identifiers; they are reserved for special use. You create an identifier by specifying it in the declaration of a variable, type, or function. In this example, `result` is an identifier for an integer variable, and `main` and `printf` are identifier names for functions.

An Identifier can only have alphanumeric characters(a-z , A-Z , 0-9) and underscore(_). The first character of an identifier can only contain alphabet(a-z , A-Z) or underscore (_) and can not be a number(0-9). Identifiers are also case sensitive in C.

For example name and Name are two different identifier in C.

Find out the identifiers in the following program

```
#include <stdio.h>
int main()
{
    int qty = 45;
    float price = 12.75f;
    char item_code = 'A';
    char c_name[20] = "Rajinikanth";
    printf("%s take %d %c item which price is %.2f per item\n", c_name,qty,item_c
    ode,price);
    return 0;
}
```

The following are the identifiers in the above program.

1. int **qty** = 45 : Here **qty** is a identifier which denotes a variable of type integer which is initialized with value 45.
2. float **price** = 12.75f : Here **price** is a identifier which denotes a variable of type float which is initialized with value 12.75.
3. char **item_code** = 'A' : Here **item_code** is a identifier which denotes a variable of type Character which is initialized with char A.
4. char **c_name[20]** = "Rajinikanth" : Here **c_name** is a identifier which denotes a variable of type Character Array which is initialized with chars Rajinikanth.

Rules for writing an identifier

1. An identifier can be composed of letters (both uppercase and lowercase letters), digits and underscore '_' only.
2. The first letter of identifier should be either a letter or an underscore. But, it is discouraged to start an identifier name with an underscore though it is legal. It is because, identifier that starts with underscore can conflict with system names. In such cases, compiler will complain about it. Some system names that start with underscore are _fileno, _iob, _wfopen etc.
3. There is no rule for the length of an identifier. However, the first 31 characters of an identifier are discriminated by the compiler. So, the first 31 letters of two identifiers in a program should be different.