Tutorial - Recursive function

Recursion is actually the process of repeating a task in a similar way. In programming languages, if you use a function inside the body of the same function, it is said that you have called the function recursively.

```
void recursion() {
   recursion(); /* function calls itself */
}

int main() {
   recursion();
}
```

The C language provides you with the ability to define functions recursively, but you must be careful that during the recursive definition of a function, we must define a condition to exit the function so that the function is in an infinite loop. don't get stuck Recursive functions are used to solve many mathematical problems, such as calculating the factorial of a number or generating the Fibonacci sequence.

In the following example, we show how to implement the Fibonacci sequence using recursive functions:

Questions

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functions.

```c
#include <stdio.h>

int fibonacci(int i) {

   if(i == 0) {
      return 0;
   }

   if(i == 1) {
      return 1;
   }
   return fibonacci(i-1) + fibonacci(i-2);
}

int  main() {

   int i;

   for (i = 0; i < 10; i++) {
      printf("%d\t\n", fibonacci(i));
   }

   return 0;
}
```

After compiling and running, the above code produces the following output:

```
0
1
1
```

```
2
3
5
8
13
21
34
```

Exercise : Recursively implement the factorial of a number.

POST AN ANSWER TO THIS QUESTION

.The training period is over

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