Language Overview

ROOK is a software development platform which adapted the simple structure of C and C++. This compiler targets all the people who want to learn programming in the easiest way possible. It is especially made for beginners in the area of computing.

ROOK is an idea that came from the word “rookie” which means “beginner”, since it aims to be used by beginners. It also means a tower in chess, which serves as the symbol for the learning foundation of rookie programmers.

General Rules

1. The main program must start with “**!**” prior the word **START**.
2. The whole program must be terminated by the word **End** followed by the terminator “!”.
3. The reserved word **READ** is for input statement and **WRITE** for output statement.
4. Statements are terminated with a period “**.**”.
5. **FIXED** is used for declaring constants and only the data type for variables.
6. **FILE** is used to declare a struct, followed by its name.
7. You can declare local variables anywhere inside the **!start-end!**.
8. You can only declare global variables and functions definitions before the **!start-end!**.
9. Declaration of a **FILE** must be outside of the **!start-end!**.
10. Declaration of variable, constants, function and file can be done on any order.
11. Identifiers must always begin with a small letter and only consist of a minimum of 1 alphanumeric character up to 10 alphanumeric characters without the use of any special characters such as dash, underscore, space etc.
12. ROOK is a case sensitive programming language for identifiers. Thus, rooK and rook are two different identifiers. Otherwise, for reserve words ROOK is not case sensitive, thus **!start** and **!START** is the same.
13. Reserved words must not be used as an identifier.
14. Any number of whitespaces between two words is allowed. Spaces, comments, newline and indention are considered whitespaces.
15. Functions must begin with the word “**start**” and ends with the word “**end**”.
16. Functions must be placed before the **!Start-End!**.
17. **Write** and **Read** are used as I/O statements.
18. **If**, **ElseIf**, **Else**, **Switch** and **Choice** are used as Conditional statements.
19. **For**, **Do** and **While** are used as looping statements.
20. Comments are user’s choice: optional.
21. Comments must always begin with “**<**” and end with “**/>**”.

Structure of the Program

|  |
| --- |
| <Functions>  <File Declaration>  <Global Declaration>  !Start  <statement.>  <statement.>  <statement.>  End! |

Sample code of ROOK printing Hello World!

|  |
| --- |
| !Start  Write “Hello World!”.  End! |

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| !Start will serve as the main function in C.  !Start and End. will also serve as your curly braces in the main function.  The reserved word Write will have the same purpose of cout in C++. |