Running The Program:

The command for running the c++ program is “c++ filename.cpp”

**AWK SCRIPT:**

AWK is a programming language designed for text processing and typically used as a data extraction and reporting tool. It is a standard feature of most Unix-like operating systems. The AWK language is a data-driven scripting language consisting of a set of actions to be taken against streams of textual data – either run directly on files or used as part of a pipeline – for purposes of extracting or transforming text, such as producing formatted reports. The language extensively uses the string datatype, association arrays (that is, arrays indexed by key strings), and regular expression.

AWK is a language for processing text files. A file is treated as a sequence of records, and by default each line is a record. Each line is broken up into a sequence of fields, so we can think of the first word in a line as the first field, the second word as the second field, and so on. An AWK program is a sequence of pattern-action statements. AWK reads the input a line at a time. A line is scanned for each pattern in the program, and for each pattern that matches, the associated action is executed.

Variable names can use any of the characters [A-Za-z0-9\_], with the exception of language keywords. The operators *+ - \* /* represent addition, subtraction, multiplication, and division, respectively. For string concatenation, simply place two variables (or string constants) next to each other. It is optional to use a space in between if string constants are involved, but two variable names placed adjacent to each other require a space in between. Double quotes delimit string constants. Statements need not end with semicolons. Finally, comments can be added to programs by using *#* as the first character on a line.

**File Name:**

File name must have the extension “.awk”.

**Running The Program:**

The command for running the awk program is “awk -f my.awk life.csv >output.txt”

**1.3 Attacks and Security Measures:**