

gram.

When a program is loaded into the memory and it becomes a process, it can be divided into four sections – stack, heap, text and data. The following image shows a simplified layout of a process inside main memory –

#### Process Components

S.N.    Component & Description

1  
Stack

The process Stack contains the temporary data such as method/function parameters, return address and local variables.

2  
Heap

This is dynamically allocated memory to a process during its run time.

3  
Text

This includes the current activity represented by the value of Program Counter and the contents of the processor's registers.

4  
Data

This section contains the global and static variables.

#### Program

A program is a piece of code which may be a single line or millions of lines. A computer program is usually written by a computer programmer in a programming language. For example, here is a simple program written in C programming language –

```
#include <stdio.h>
```

```
int main() {  
    printf("Hello, World!  
");  
    return 0;  
}
```

A computer program is a collection of instructions that performs a specific task when executed by a computer. When we compare a program with a process, we can conclude that a process is a dynamic instance of a computer program.

A part of a computer program that performs a well-defined task