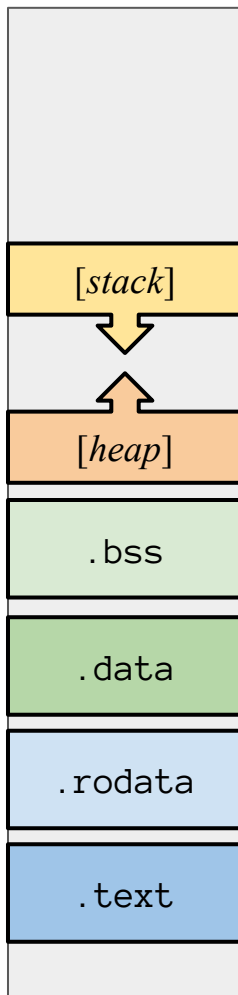


High
Address



Low
Address



C++ Program Memory Layout

<i>Name</i>	<i>Description</i>	<i>Permissions</i>
Stack	Manages active function calls, local variables, and return addresses using last-in, first-out (LIFO) memory allocation.	rw-
Heap	Provides dynamically allocated, manually managed long-lived memory independent of function execution scopes.	rw-
Uninitialized Data Segment	Reserves zero-initialized memory for global and static variables without storing their actual initial values inside the executable file.	rw-
Initialized Data Segment	Stores global and static variables that are explicitly initialized with non-zero values in the program's source code.	rw-
Read Only Data Segment	Stores read-only constants and literal values that cannot be modified during program execution.	r--
Text Segment	Stores the compiled machine code instructions executed directly by the CPU.	r-x

r: read, w: write, x: execute