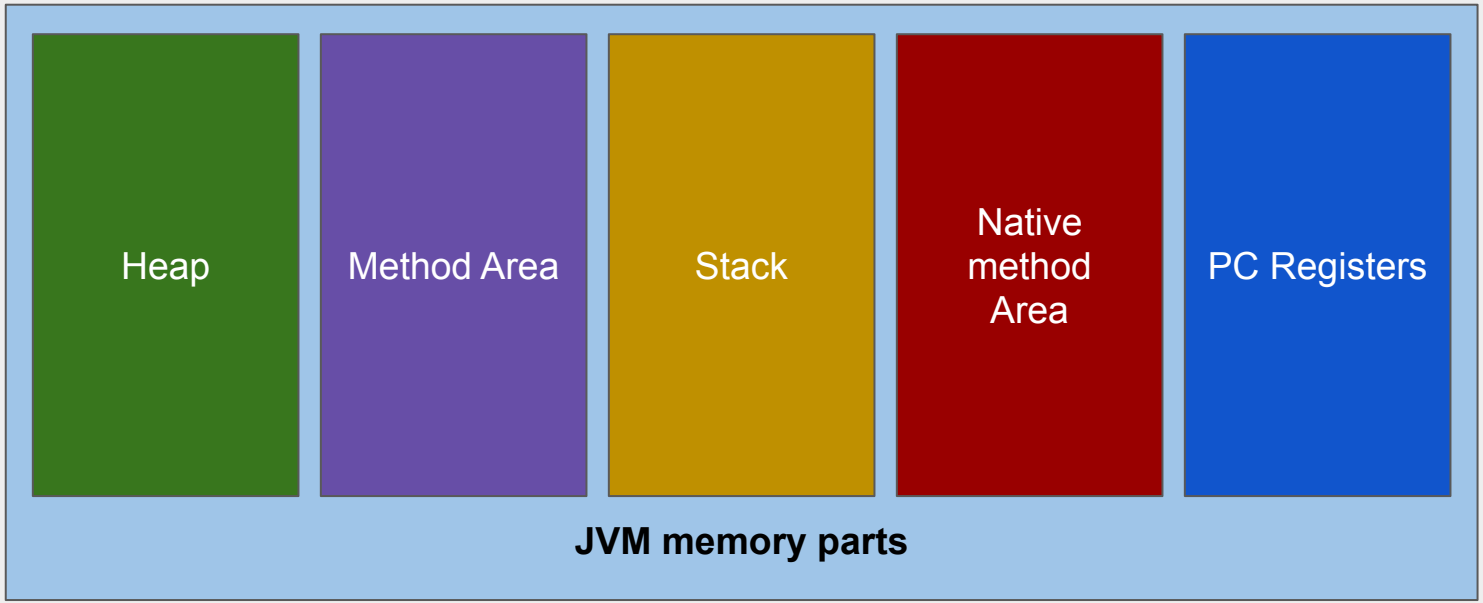
Stack Memory

JVM Memory Structure

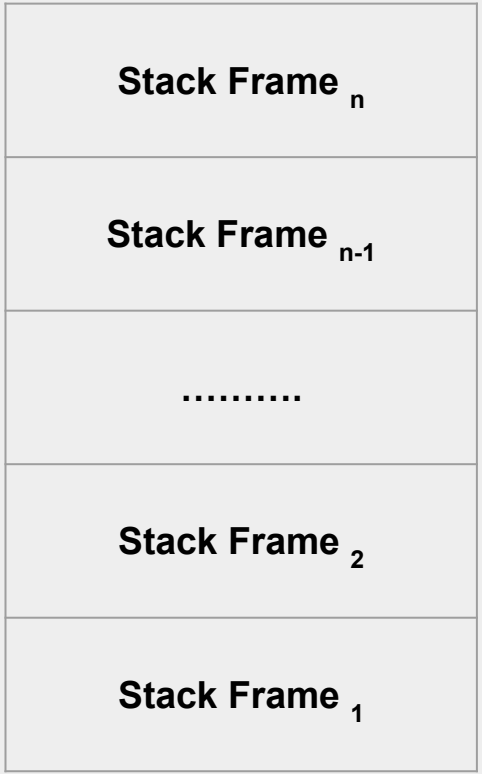


Note: The heap area is one of the most important memory areas of JVM. All the java objects are stored in heap area.

Stack and Stack Frame

The Java stack is composed of stack frames (or frames). A stack frame contains the state of one Java method invocation. When a thread invokes a method, the Java virtual machine pushes a new frame onto that thread's Java stack. When the method completes, the virtual machine pops and discards the frame for that method

Stack



Stack Frame

StackOverflow error

Advantages of using Stack Memory in Java

- Stack memory is **thread-safe** because **each thread has its stack** area.
- Memory **allocation** and **deallocation** are **faster**.
- Memory is **automatically allocated** and **deallocated** for a method.

Disadvantages of using Stack Memory in Java

- Stack memory is **fixed** and **cannot grow** or **shrink** once created.
- Stack memory works in **LIFO** manner. So, **random access** is not possible.

Interview Questions