**Difference Between Stack and heap Area**

|  |  |  |
| --- | --- | --- |
| **Parameter** | **Stack** | **Heap** |
| Access  Memory Allocation  Allocation and Deallocation  Deallocation | Local variables only  Memory is allocated in a contiguous block.  Automatically done by compiler instructions.  Does not require to de-allocate variables. | It access variables globally.  Memory is allocated in any random order.  It is manually done by the programmer.  Explicit de-allocation is needed. |

**JIT Compiler(ref crore java page no 13)**

* JIT compiler is the part of JVM which increases to be speed of execution of a Java program
* JIT compiler will execute the looping instruction
* JIT compiler reads the print a instruction and converts that into machine code
* JIT compiler allots a block of memory and pushes this machine code instruction into that memory
* Now, the processor will fetch this instruction from memory and executes code.
* After loading the . class code into memory, JVM first of all identifies which code is to be left to interpreter and which one to JIT compiler so that the performance is better. The blocks of code allocated for JIT compiler are also called' hotspots. Thus, both the interpreter and JIT compiler will work simultaneously to translate the byte code into machine code

**Final**

* Final is a keyword in java which is used to impose some restrictions
* If a variable is declared as final that **variable** cannot be **reinitialized**
* If a method is declared as final that **method** cannot be **overridden**.
* If a class is declared as final that **class** cannot be **inherited**

**Difference Between Static and non-static methods**

|  |  |
| --- | --- |
| **Static** | **Instance** |
| If a method precedes with static keyword that method is static  It can not access instance variables  It can access class fields  These methods are called by using class name  It stores in stack area | If we are not Declaring method as static then that method is a instance method  It can access instance variable  It can also access class fields  To call this method we need to create a object.  It stores in heap area |

**Cloning The Object**

* The process of creating an exact copy of an existing object is called 'cloning'.
* clone () method of Object class is used for cloning

**Constructor can be static**

* static keyword belongs to a class rather than the object of a class.
* A constructor is called when an object of a class is created, so no use of the static constructor**.**