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|  | What is compile time and run time?  Compile-time is the instance where the code you entered is converted to executable while Run-time is the instance where the executable is running. |
|  | What is heap?  Heap is a special case of balanced binary tree data structure where the root-node key is compared with its children and arranged accordingly. |
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|  | How java manage it's memory?  Java memory management is an ongoing challenge and a skill that must be mastered to have properly tuned applications that function in a scalable manner. |
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|  | What is the difference between String, StringBuffer and StringBuilder?   1. String is immutable whereas StringBuffer and StringBuider are mutable classes. StringBuffer is thread safe and synchronized whereas StringBuilder is not, thats why [StringBuilder is more faster than StringBuffer](https://www.journaldev.com/137/stringbuffer-vs-stringbuilder). String concat + operator internally uses StringBuffer or StringBuilder class. |
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|  | What is Singleton class?  a singleton class is a class that can have only one object (an instance of the class) at a time. |
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|  | What is Serialization and Deserialization?  Serialization is a mechanism of converting the state of an object into a byte stream. Deserialization is the reverse process where the byte stream is used to recreate the actual Java object in memory |
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|  | Which one will take more memory, an int or Integer?  int is one of several integer types. Some may be smaller than int, some may be larger, and some may be the same size, depending on the particular implementation you’re using. |
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|  | Why is String Immutable in Java?  The string is Immutable in Java because String objects are cached in String pool. |
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|  | What is constructor chaining in Java?  Constructor chaining can be done in two ways: Within same class: It can be done using this() keyword for constructors in same class. |
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|  | The difference between Serial and Parallel Garbage Collector?  a serial collector is a default copying collector which uses only one GC thread for the GC operation, while a parallel collector uses multiple GC threads for the GC operation. |
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|  | What is JIT stands for?   manufacturing is a production model in which items are created to meet demand, not created in surplus or in advance of need. |
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|  | Explain Java Heap space and Garbage collection?  Java objects reside in an area called the heap. The heap is created when the JVMstarts up and may increase or decrease in size while the application runs. When the heap becomes full, garbage is collected. During the garbage collection objects that are no longer used are cleared, thus making space for new objects. |
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|  | Can you guarantee the garbage collection process?  Java garbage collection is an automatic process to manage the runtime memory used by programs. By doing it automatic JVM relieves the programmer of the overhead of assigning and freeing up memory resources in a program. |
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|  | What is the difference between stack and heap in Java?  Stack and heap memory are two terms programmers starts hearing once they started programming but without any clear and definite explanation. |