Report: Answer the Following Questions  
Deadline: Monday 11-01-2021 @ 11.59 PM -- To: ahmedaboulroos@gmail.com  
**By: Mohammad** **AbouElSherbini**

Q1. What is the Difference between?  
• Process & Thread:

Process is the running instance of a program and can be divided into multiple independent threads each running in parallel   
• System Thread & User-Defined Thread & Daemon Thread

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• Parallelism & Concurrency  
• Synchronous & Asynchronous Programming  
• Callable & Runnable & Supplier interfaces  
• StringBuffer & StringBuilder  
• Synchronized Collections & Concurrent Collections  
• Inter-Process Communication & Inter-Thread Communication  
Q2. What is?  
• Thread Creation Techniques  
• Thread States  
• Context Switch  
• Thread Priority  
• Polling  
• Thread Safety  
• Liveness  
• Dead-Lock (How to Avoid, Recover, Detect)  
• Live-Lock  
• Starvation  
• Thread contention  
• Thread interference  
• Thread interrupts  
• Memory Consistency errors  
• Synchronization  
• Fork/Join Framework (and when to use it)  
• Race Condition  
• Shared Mutability  
• Double Checked Locking of Singleton  
• Parallel Streams  
Q3. What happens when an Exception occurs in a thread?