What is the difference between Process and Thread?  
What are the benefits of multi-threaded programming?  
What is difference between user Thread and daemon Thread?  
How can we create a Thread in Java?  
What are different states in lifecycle of Thread?  
Can we call run() method of a Thread class?  
How can we pause the execution of a Thread for specific time?  
What do you understand about Thread Priority?  
What is Thread Scheduler and Time Slicing?  
What is context-switching in multi-threading?  
How can we make sure main() is the last thread to finish in Java Program?  
How does thread communicate with each other?  
Why thread communication methods wait(), notify() and notifyAll() are in Object class?  
Why wait(), notify() and notifyAll() methods have to be called from synchronized method or block?  
Why Thread sleep() and yield() methods are static?  
How can we achieve thread safety in Java?  
What is volatile keyword in Java  
Which is more preferred – Synchronized method or Synchronized block?  
How to create daemon thread in Java?  
What is ThreadLocal?  
What is Thread Group? Why it’s advised not to use it?  
What is Java Thread Dump, How can we get Java Thread dump of a Program?  
What is Deadlock? How to analyze and avoid deadlock situation?  
What is Java Timer Class? How to schedule a task to run after specific interval?  
What is Thread Pool? How can we create Thread Pool in Java?  
What will happen if we don’t override Thread class run() method?

What is atomic operation? What are atomic classes in Java Concurrency API?  
What is Lock interface in Java Concurrency API? What are it’s benefits over synchronization?  
What is Executors Framework?  
What is BlockingQueue? How can we implement Producer-Consumer problem using Blocking Queue?  
What is Callable and Future?  
What is FutureTask class?  
What are Concurrent Collection Classes?  
What is Executors Class?  
What are some of the improvements in Concurrency API in Java 8?

Object Class notify,notifyAll,wait ?

Question1. What Do You Understand By Executor Framework In Java?  
Question2. What Is The Role Of Executorservice In Java?  
  
Question3. What Is Executors In Java Executor Framework?  
  
  
Question4. What Is The Role Of Futuretask And Future In Java?  
  
Question5. What Is Difference Between Shutdownnow() And Shutdown() In Executor   
Question6. How To Terminate A Thread In Executor Framework In Java?  
  
  
Question7. What Is The Role Of Executors.privileged Threadfactory() In Executor Framework?  
  
  
Question8. What Is The Role Of Executors.unconfigurable Executorservice In Executor   
Question9. What Are The Different Policy In Executor Framework?  
  
  
Question10. How To Get Return Value Of A Callable Thread In Java Executor Framework?  
  
  
Question11. Write A Program Using Executor In Java Or Example Of Thread Pool In Java?  
  
  
Question12. What Is Semaphore?  
  
  
Question13. What Is Cyclicbarrier And Countdownlatch?  
Answer :  
  
Question14. How Countdownlatch Work In Java?  
Question15. What Is Difference Between Lock Interface And Synchronized Keyword?  
  
Question16. What Is Condition?  
  
Question17. What Is Readwritelock?

Lab Work

Q1) Write a program to do the following operations using Thread:

Create an user defined Thread class called as “CopyDataThread .java” .

This class will be designed to copy the content from one file “source.txt ” to another file “target.txt” and after every 10 characters copied, “10 characters are copied” message will be shown to user.(Keep delay of 5 seconds after every 10 characters read.)

Create another class “FileProgram.java” which will create above thread. Pass required File Stream classes to CopyDataThread constructor and implement the above functionality.

Q2) Write a thread program to display timer where timer will get refresh after every 10seconds.( Use Runnable implementation )