What is future and future task?

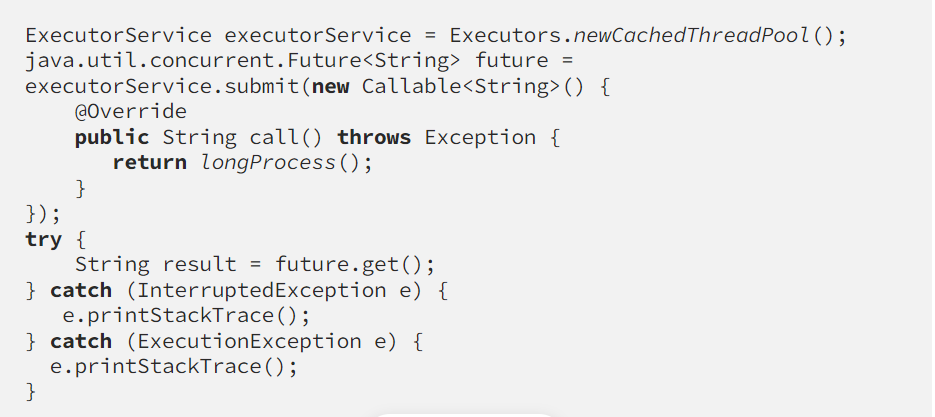
Futures allow us to execute functionality on different threads to free up our current one for further computation

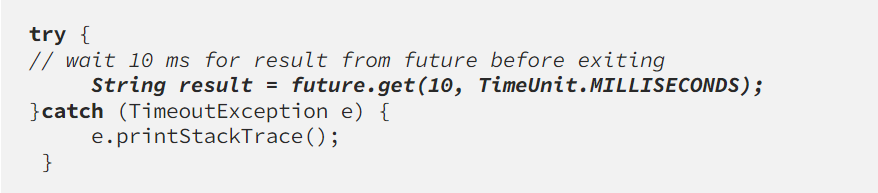
ExecutorService is Interface used to retrieve different threads using method to execute on.

It provides pool of threads and API for assigning them task.

There are some factory Methods which allows to generate concrete implementation. We can crea our own as well.

Callable Interface – We need the work we would like to do for the retrieving threads returning a single value using single method.





* Wait for 10 seconds and then it timeout

**Limitations of Future interface**

1. *Futures* cannot be completed manually.
2. There is no way to execute multiple *futures (*or results*)*in parallel and then combine the results together.
3. There are no exception handling constructs for *Future*.
4. *Future* doesn’t have the mechanism to create multiple stages of processing that can be chained together. It needs to be done manually.
5. *Future* doesn’t have the mechanism to notify you of the completion of an API.

Fortunately, with the release of Java 8, **CompletableFuture** combats all of the above problems and provides a much better asynchronous programming approach in Java.