[Asynchronous programming is a technique that lets you offload long running operations to background threads so that the main thread of your application remains available to respond to new input from your user.](https://www.linkedin.com/learning/asynchronous-programming-in-c-sharp/what-is-asynchronous-programming?contextUrn=urn%3Ali%3AlyndaLearningPath%3A6706e94e498e180fcd4c8b19&focused=false&leis=AICC&resume=false&u=2965546)

[When you write asynchronous code, you're able to send those long-running tasks to separate threads. Since the main user interface thread isn't busy performing that work, it can always be available to respond to new user events. When the worker threads are done, they can report their changes back to the main thread so the interface can be updated with their results](https://www.linkedin.com/learning/asynchronous-programming-in-c-sharp/what-is-asynchronous-programming?contextUrn=urn%3Ali%3AlyndaLearningPath%3A6706e94e498e180fcd4c8b19&focused=false&leis=AICC&resume=false&u=2965546)

Event Based Async Pattern (EAP):

* EventHandler Delegate
* EventArg Derived Types
* ReadAsync,ReadCompleted, ReadAsyncCompleted

Asynchrounous Programming Model (APM):

* Uses IASyncResult interface
* Async operations require Begin and End Methods.

Task Based Async Pattern

* Task
* Task<T>
* Async/Await