

# The Promise Workflow

The compiler transforms a coroutine into the following workflow.

```
{
    Promise prom;
    co_await prom.initial_suspend();
    try {
        <function body having co_return, co_yield, or co_await>
    }
    catch (...) {
        prom.unhandled_exception();
    }
FinalSuspend:
    co_await prom.final_suspend();
}
```

# The Awaiter Workflow

The compiler creates the following workflow based on the Awaiter.

```
awaiter.await_ready() returns false:  
    suspend coroutine  
awaiter.await_suspend(coroutineHandle) returns:  
    void:  
    bool:  
    another coroutine handle:  
resumptionPoint:  
return awaiter.await_resume();
```

Return value of <code>awaitable.await_suspend()</code>	Description
void	The coroutine keeps suspended and returns to the caller.
bool == true	The coroutine keeps suspended and returns to the caller.
bool == false	The coroutine is resumed and does not return to the caller.
anotherCoroutineHandle	The other coroutine is resumed and returns to the caller.

```
eagerFutureWithComments.cpp  
lazyFuture.cpp  
lazyFutureOnOtherThread.cpp
```