The Synchronous Program Model

- The barrier synchronization in Synchronous Mode.
- The processor starts executing its synchronous code.
- The current processor checks if the condition is met.
- If the condition is met, the processor executes the synchronous code.
- If the condition is not met, the processor goes to the next statement.
- The processor then checks if the next statement is a barrier statement.
- If it is, the processor waits until all other processors have executed their synchronous code.
- If it is not, the processor moves on to the next statement.

The Asynchronous Program Model

- The processor starts executing its asynchronous code.
- The processor checks if the condition is met.
- If the condition is met, the processor executes the asynchronous code.
- If the condition is not met, the processor goes to the next statement.
- The processor then checks if the next statement is a barrier statement.
- If it is, the processor waits until all other processors have executed their asynchronous code.
- If it is not, the processor moves on to the next statement.

The Synchronous Execution

- The processor starts executing its synchronous code.
- The processor checks if the condition is met.
- If the condition is met, the processor executes the synchronous code.
- If the condition is not met, the processor goes to the next statement.
- The processor then checks if the next statement is a barrier statement.
- If it is, the processor waits until all other processors have executed their synchronous code.
- If it is not, the processor moves on to the next statement.

The Asynchronous Execution

- The processor starts executing its asynchronous code.
- The processor checks if the condition is met.
- If the condition is met, the processor executes the asynchronous code.
- If the condition is not met, the processor goes to the next statement.
- The processor then checks if the next statement is a barrier statement.
- If it is, the processor waits until all other processors have executed their asynchronous code.
- If it is not, the processor moves on to the next statement.