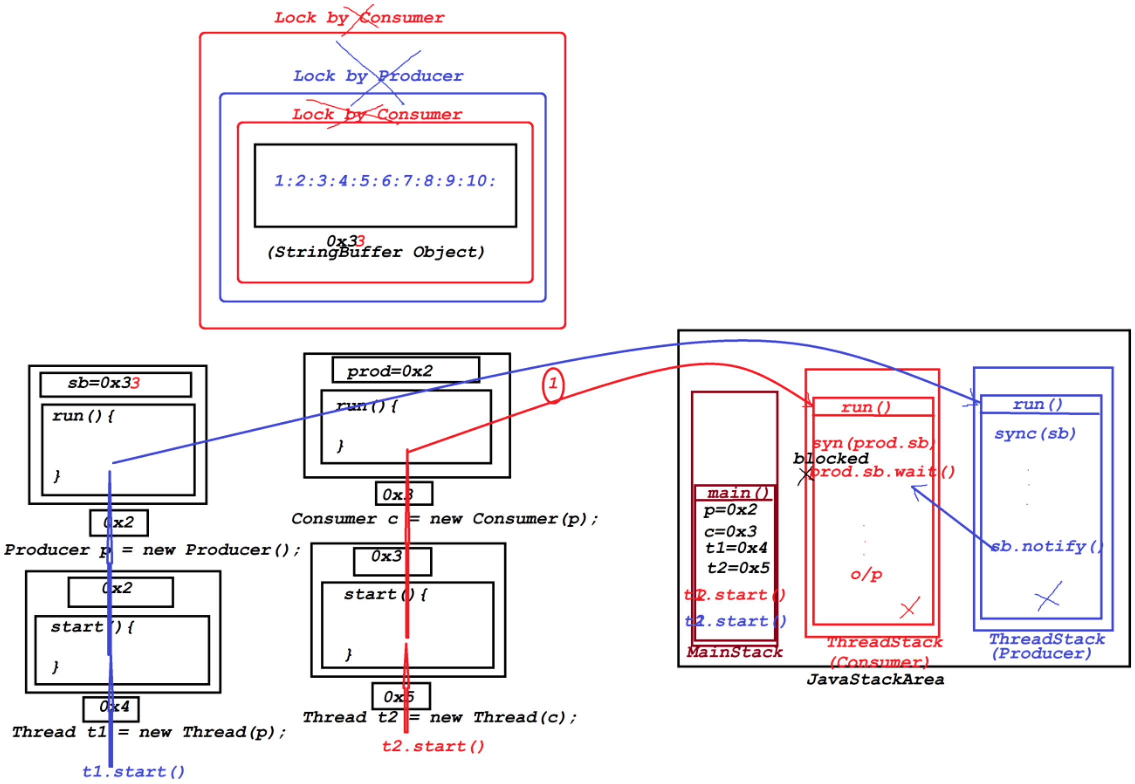
Dt : 1/11/2023

Execution flow of above program:



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****imp***

Thread Life-Cycle:

=>Thread Life-Cycle demonstrates different states of thread from Thread creation to Thread Completion and from Thread Creation to Thread termination.

=>The following are the states of Thread Life-Cycle:

1.New Thread(Creating Thread)

2.Ready-to-run

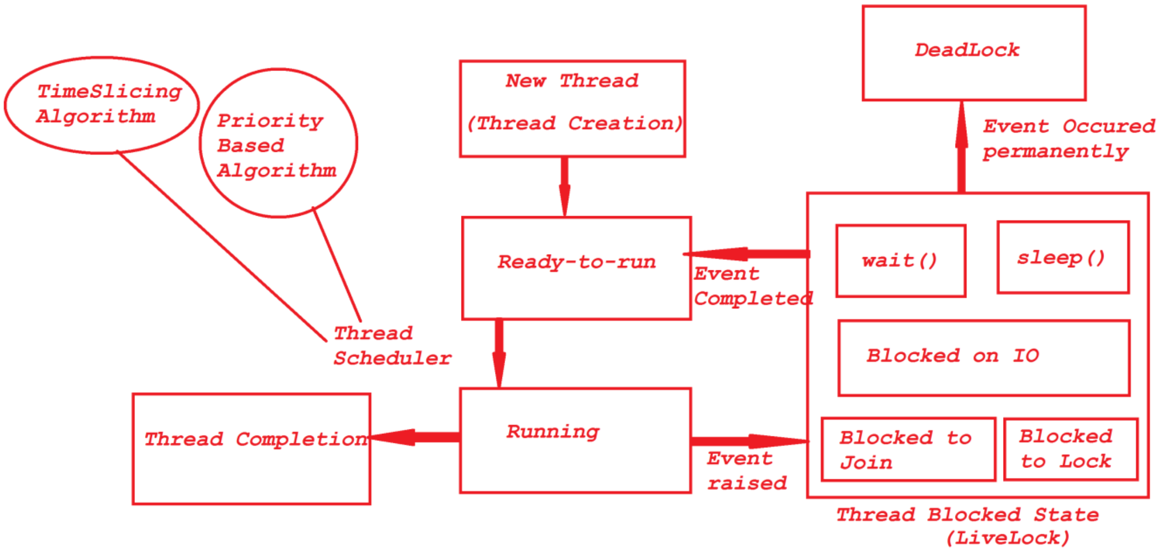
3.Running

(i)Thread Completion

(ii)Thread Blocked State

=>DeadLock

Diagram:



1.New Thread(Creating Thread)

=>The process of creating new thread using start()-method is known as New Thread creation

2.Ready-to-run:

=>The state where the threads are waiting for execution,which means waiting for Thread-Scheduler,is known as Ready-to-run state.

3.Running:

=>The process in which the thread is executing is known as Running state

(i)Thread Completion:

=>The state in which the thread is executed successfully with result, is known as Thread Completion state.

(ii)Thread Blocked State:

=>The state in which the thread execution is blocked temporarly is known as Thread Blocked State and which is also known as LiveLock.

faq:

define DeadLock?

=>The permanent blockage of thread is known as DeadLock

=>If any event in Blocked State occurs permanently then Thread is under deadlock

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faq:

wt is the diff b/w

(i)wait()

(ii)sleep()

=>wait() method block the thread until it receives the msg,but sleep() method block the thread on some timer.

=>wait() method will unlock the resources,but sleep() method willnot unlock the resources.

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faq:

define start() method?

=>start() is a pre-defined method from java.lang.Thread class and which is holding thread related algorithms.

=>while executing start() method will specify the following:

(i)Creating separate Thread-Stack.

(ii)Loading run() method on to separate Thread-stack.

(iii)Activating Thread-Scheduler to manage thread executions.

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faq:

define Thread-Scheduler?

=>Thread-Scheduler is a Thread-manager which organizes threads from

ready-to-run state to running state,using the following algorithms:

(a)Time Slicing Algorithm

(b)Priority Based Algorithm

(a)Time Slicing Algorithm:

=>In Time Slicing Algorithms all multiple threads are executed based on time-slice.

=>Time Slicing Algorithm is a default algorithm used by the Thread Scheduler

(b)Priority Based Algorithm:

=>In Priority Based Algorithm the threads are executed based on Thread Priorities.

=>In Java,thread priorities must be taken in b/w 1 to 10

1 - Min Priority
10 - Max Priority
5 - Normal Priority/default Priority

=>The following fields from java.lang.Thread class will represent Priorities:

public static final int MIN_PRIORITY;
public static final int NORM_PRIORITY;
public static final int MAX_PRIORITY;
