take example like this

A thread, priority 31, has lock lock\_1.

B thread, priority 32, has lock lock\_2, and acquire lock\_1

C thread, priority 33, acquire lock\_2

Step 1: At the beginning:

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.---------------------------------------------------.

| Thread A (Beginning) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 31 |

| priority\_original | 31 |

| is\_donated | false |

| locks | {lock\_1 (priority\_lock = -1)} |

| lock\_blocked\_by | NULL |

'-------------------+-------------------------------'

.---------------------------------------------------.

| Thread B (Beginning) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 32 |

| priority\_original | 32 |

| is\_donated | false |

| locks | {lock\_2 (priority\_lock = -1)} |

| lock\_blocked\_by | NULL |

'-------------------+-------------------------------'

.---------------------------.

| Thread C (Beginning) |

+-------------------+-------+

| member | value |

+-------------------+-------+

| priority | 33 |

| priority\_original | 33 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | NULL |

'-------------------+-------'

==================================================================

Step 2: B acquires lock\_1:

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.---------------------------------------------------.

| Thread A (B acquires L1) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 31 |

| priority\_original | 32 |

| is\_donated | true |

| locks | {lock\_1 (priority\_lock = 32)} |

| lock\_blocked\_by | NULL |

'-------------------+-------------------------------'

.---------------------------------------------------.

| Thread B (B acquires L1) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 32 |

| priority\_original | 32 |

| is\_donated | false |

| locks | {lock\_2 (priority\_lock = -1)} |

| lock\_blocked\_by | &lock1 |

'-------------------+-------------------------------'

.---------------------------.

| Thread C (B acquires L1) |

+-------------------+-------+

| member | value |

+-------------------+-------+

| priority | 33 |

| priority\_original | 33 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | NULL |

'-------------------+-------'

==================================================================

STEP 3-1: C acquires lock\_2:

============================

.---------------------------------------------------.

| Thread B (C acquires L2, Step 1) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 32 |

| priority\_original | 33 |

| is\_donated | true |

| locks | {lock\_2 (priority\_lock = 33)} |

| lock\_blocked\_by | &lock1 |

'-------------------+-------------------------------'

.----------------------------------.

| Thread C (C acquires L2, Step 1) |

+----------------------+-----------+

| member | value |

+----------------------+-----------+

| priority | 33 |

| priority\_original | 33 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | &lock\_2 |

'----------------------+-----------'

.---------------------------------------------------.

| Thread A (C acquires L2, Step 1) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 31 |

| priority\_original | 32 |

| is\_donated | true |

| locks | {lock\_1 (priority\_lock = 32)} |

| lock\_blocked\_by | NULL |

'-------------------+-------------------------------'

==================================================================

STEP 3-2: C acquires lock\_2:

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.---------------------------------------------------.

| Thread B (C acquires L2, Step 2) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 32 |

| priority\_original | 33 |

| is\_donated | true |

| locks | {lock\_2 (priority\_lock = 33)} |

| lock\_blocked\_by | &lock1 |

'-------------------+-------------------------------'

.----------------------------------.

| Thread C (C acquires L2, Step 2) |

+----------------------+-----------+

| member | value |

+----------------------+-----------+

| priority | 33 |

| priority\_original | 33 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | &lock\_2 |

'----------------------+-----------'

.---------------------------------------------------.

| Thread A (C acquires L2, Step 2) |

+-------------------+-------------------------------+

| member | value |

+-------------------+-------------------------------+

| priority | 31 |

| priority\_original | 33 |

| is\_donated | true |

| locks | {lock\_1 (priority\_lock = 32)} |

| lock\_blocked\_by | NULL |

'-------------------+-------------------------------'

==================================================================

STEP 4: A releases lock\_1:

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.-------------------------------.

| Thread A (A releases lock\_1)) |

+---------------------+---------+

| member | value |

+---------------------+---------+

| priority | 31 |

| priority\_original | 31 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | NULL |

'---------------------+---------'

.----------------------------------------------------.

| Thread B (A releases lock\_1) |

+-------------------+--------------------------------+

| member | value |

+-------------------+--------------------------------+

| priority | 32 |

| priority\_original | 33 |

| is\_donated | true |

| locks | {&lock\_2 (priority\_lock = 33), |

| | &lock\_1 (priority\_lock = 32)} |

| lock\_blocked\_by | NULL |

'-------------------+--------------------------------'

.------------------------------.

| Thread C (A releases lock\_1) |

+--------------------+---------+

| member | value |

+--------------------+---------+

| priority | 33 |

| priority\_original | 33 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | &lock\_2 |

'--------------------+---------'

==================================================================

STEP 5: B releases lock\_2:

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.-------------------------------.

| Thread A (B releases lock\_2)) |

+---------------------+---------+

| member | value |

+---------------------+---------+

| priority | 31 |

| priority\_original | 31 |

| is\_donated | false |

| locks | {} |

| lock\_blocked\_by | NULL |

'---------------------+---------'

.----------------------------------------------------.

| Thread B (B releases lock\_2) |

+-------------------+--------------------------------+

| member | value |

+-------------------+--------------------------------+

| priority | 32 |

| priority\_original | 32 |

| is\_donated | false |

| locks | {&lock\_1 (priority\_lock = 32)} |

| lock\_blocked\_by | NULL |

'-------------------+--------------------------------'

.----------------------------------------------------.

| Thread C (B releases lock\_2) |

+-------------------+--------------------------------+

| member | value |

+-------------------+--------------------------------+

| priority | 33 |

| priority\_original | 33 |

| is\_donated | false |

| locks | {&lock\_2 (priority\_lock = 33)} |

| lock\_blocked\_by | NULL |

'-------------------+--------------------------------'