

Log de ejecución de transacciones generado (Sin Bloqueo)

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1 Ingrese la cantidad de Transacciones concurrentes
2 5
3 [2021-10-30 23:50:56 323] | [INFO] | |
4 -----Iniciando Estado-----
5
6 [EL Info]: 2021-10-30 23:50:57.986--ServerSession(1816756435)--EclipseLink, version: Eclipse Persistence Services - 2.7.7.v20200504-69f2c2b80d
7 [2021-10-30 23:50:59 630] | [INFO] | Persona1: Persona: 1 Juan Perez 500.0 | |
8 [2021-10-30 23:50:59 651] | [INFO] | Persona2: Persona: 2 Alma Almada 0.0 | |
9 [2021-10-30 23:50:59 653] | [INFO] | |
10 -----
11 |
12 [2021-10-30 23:50:59 656] | [INFO] | T#0 --- EXTRAER P1 (150)--- |
13 [2021-10-30 23:50:59 659] | [INFO] | T#0 Recuperando persona |
14 [2021-10-30 23:50:59 662] | [INFO] | T#0 Persona: 1 Juan Perez 500.0 | |
15 [2021-10-30 23:50:59 657] | [INFO] | T#2 --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- |
16 [2021-10-30 23:50:59 656] | [INFO] | T#1 --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- |
17 [2021-10-30 23:50:59 666] | [INFO] | T#4 --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- |
18 [2021-10-30 23:50:59 669] | [INFO] | T#0 Extraer 150 |
19 [2021-10-30 23:50:59 673] | [INFO] | T#0 Saldo actual: 350 |
20 [2021-10-30 23:50:59 666] | [INFO] | T#2 Recuperando persona 1 |
21 [2021-10-30 23:50:59 677] | [INFO] | T#4 Recuperando persona 1 |
22 [2021-10-30 23:50:59 680] | [INFO] | T#4 Persona recuperada: Persona: 1 Juan Perez 500.0 | |
23 [2021-10-30 23:50:59 681] | [INFO] | T#4 Extraer 100 |
24 [2021-10-30 23:50:59 686] | [INFO] | T#4 Recuperando persona 2 |
25 [2021-10-30 23:50:59 664] | [INFO] | T#3 --- EXTRAER P1 (150)--- |
26 [2021-10-30 23:50:59 690] | [INFO] | T#3 Recuperando persona |
27 [2021-10-30 23:50:59 689] | [INFO] | T#4 Persona: 2 Alma Almada 0.0 | |
28 [2021-10-30 23:50:59 679] | [INFO] | T#2 Persona recuperada: Persona: 1 Juan Perez 500.0 | |
29 [2021-10-30 23:50:59 667] | [INFO] | T#1 Recuperando persona 1 |
30 [2021-10-30 23:50:59 699] | [INFO] | T#1 Persona recuperada: Persona: 1 Juan Perez 500.0 | |
31 [2021-10-30 23:50:59 700] | [INFO] | T#1 Extraer 100 |
32 [2021-10-30 23:50:59 703] | [INFO] | T#1 Recuperando persona 2 |
33 [2021-10-30 23:50:59 705] | [INFO] | T#1 Persona: 2 Alma Almada 0.0 | |
34 [2021-10-30 23:50:59 706] | [INFO] | T#2 Extraer 100 |
35 [2021-10-30 23:50:59 710] | [INFO] | T#2 Recuperando persona 2 |
36 [2021-10-30 23:50:59 712] | [INFO] | T#1 Depositar 100 |
37 [2021-10-30 23:50:59 713] | [INFO] | T#1 Sleeping 5seg |
38 [2021-10-30 23:50:59 696] | [INFO] | T#4 Depositar 100 |
39 [2021-10-30 23:50:59 694] | [INFO] | T#3 Persona: 1 Juan Perez 500.0 | |
40 [2021-10-30 23:50:59 718] | [INFO] | T#3 Extraer 150 |
41 [2021-10-30 23:50:59 717] | [INFO] | T#4 Sleeping 5seg |
42 [2021-10-30 23:50:59 720] | [INFO] | T#3 Saldo actual: 350 |
43 [2021-10-30 23:50:59 723] | [INFO] | T#2 Persona: 2 Alma Almada 0.0 | |
44 [2021-10-30 23:50:59 726] | [INFO] | T#2 Depositar 100 |
45 [2021-10-30 23:50:59 728] | [INFO] | T#2 Sleeping 5seg |
46 [2021-10-30 23:51:04 835] | [INFO] | |
47 -----ESTADO-----
48 |
49 [2021-10-30 23:51:04 838] | [INFO] | Persona1: Persona: 1 Juan Perez 400.0 | |
50 [2021-10-30 23:51:04 840] | [INFO] | Persona2: Persona: 2 Alma Almada 100.0 | |
51 [2021-10-30 23:51:04 842] | [INFO] | |
52 -----
53 |

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Log de ejecución de transacciones generado (Con Bloqueo)

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1 Ingrese la cantidad de Transacciones concurrentes
2 5
3 [2021-10-30 23:47:20 125] | [INFO] | |
4 -----Iniciando Estado-----
5
6 [EL Info]: 2021-10-30 23:47:22.157--ServerSession(1759482496)--EclipseLink, version: Eclipse Persistence Services - 2.7.7.v20200504-69f2c2b80d
7 [2021-10-30 23:47:23 630] | [INFO] | Persona1: Persona: 1 Juan Perez 500.0 | |
8 [2021-10-30 23:47:23 649] | [INFO] | Persona2: Persona: 2 Alma Almada 0.0 | |
9 [2021-10-30 23:47:23 651] | [INFO] | |
10 -----
11 |
12 [2021-10-30 23:47:23 667] | [INFO] | T#1 --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- |
13 [2021-10-30 23:47:23 668] | [INFO] | T#2 --- EXTRAER P1 (150)--- |
14 [2021-10-30 23:47:23 667] | [INFO] | T#0 --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- |
15 [2021-10-30 23:47:23 670] | [INFO] | T#1 Recuperando persona 1 |
16 [2021-10-30 23:47:23 674] | [INFO] | T#4 --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- |
17 [2021-10-30 23:47:23 681] | [INFO] | T#4 Recuperando persona 1 |
18 [2021-10-30 23:47:23 671] | [INFO] | T#3 --- EXTRAER P1 (150)--- |
19 [2021-10-30 23:47:23 685] | [INFO] | T#3 Recuperando persona |
20 [2021-10-30 23:47:23 673] | [INFO] | T#0 Recuperando persona 1 |
21 [2021-10-30 23:47:23 692] | [INFO] | T#1 Persona recuperada: Persona: 1 Juan Perez 500.0 | |
22 [2021-10-30 23:47:23 701] | [INFO] | T#1 Extraer 100 |
23 [2021-10-30 23:47:23 705] | [INFO] | T#1 Recuperando persona 2 |
24 [2021-10-30 23:47:23 692] | [INFO] | T#2 Recuperando persona |
25 [2021-10-30 23:47:23 722] | [INFO] | T#1 Persona: 2 Alma Almada 0.0 | |
26 [2021-10-30 23:47:23 724] | [INFO] | T#1 Depositar 100 |
27 [2021-10-30 23:47:23 726] | [INFO] | T#1 Sleeping 5seg |
28 [2021-10-30 23:47:28 750] | [INFO] | T#4 Persona recuperada: Persona: 1 Juan Perez 400.0 | |
29 [2021-10-30 23:47:28 751] | [INFO] | T#4 Extraer 100 |
30 [2021-10-30 23:47:28 753] | [INFO] | T#4 Recuperando persona 2 |
31 [2021-10-30 23:47:28 759] | [INFO] | T#4 Persona: 2 Alma Almada 100.0 | |
32 [2021-10-30 23:47:28 760] | [INFO] | T#4 Depositar 100 |
33 [2021-10-30 23:47:28 762] | [INFO] | T#4 Sleeping 5seg |
34 [2021-10-30 23:47:33 783] | [INFO] | T#2 Persona: 1 Juan Perez 300.0 | |
35 [2021-10-30 23:47:33 785] | [INFO] | T#2 Extraer 150 |
36 [2021-10-30 23:47:33 787] | [INFO] | T#2 Saldo actual: 150 |
37 [2021-10-30 23:47:33 800] | [INFO] | T#0 Persona recuperada: Persona: 1 Juan Perez 150.0 | |
38 [2021-10-30 23:47:33 802] | [INFO] | T#0 Extraer 100 |
39 [2021-10-30 23:47:33 804] | [INFO] | T#0 Recuperando persona 2 |
40 [2021-10-30 23:47:33 811] | [INFO] | T#0 Persona: 2 Alma Almada 200.0 | |
41 [2021-10-30 23:47:33 812] | [INFO] | T#0 Depositar 100 |
42 [2021-10-30 23:47:33 814] | [INFO] | T#0 Sleeping 5seg |
43 [2021-10-30 23:47:38 842] | [INFO] | T#3 Persona: 1 Juan Perez 50.0 | |
44 [2021-10-30 23:47:38 844] | [INFO] | T#3 Extraer 150 |
45 [2021-10-30 23:47:38 846] | [SEVERE] | Rollback due to java.lang.Exception: Saldo insuficiente |
46 [2021-10-30 23:47:38 880] | [SEVERE] | Transaction "rolled back" because transaction was set to RollbackOnly.T#3 | |
47 [2021-10-30 23:47:38 882] | [INFO] | |
48 -----ESTADO-----
49 |
50 [2021-10-30 23:47:38 885] | [INFO] | Persona1: Persona: 1 Juan Perez 50.0 | |
51 [2021-10-30 23:47:38 887] | [INFO] | Persona2: Persona: 2 Alma Almada 300.0 | |
52 [2021-10-30 23:47:38 888] | [INFO] | |
53 -----
54 |

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Tabulación de datos de la consola (Sin Bloqueo)

Timeline	T0	T1	T2	T3	T4
[2021-10-30 23:50:59 656]	--- EXTRAER P1 (150)---				
[2021-10-30 23:50:59 656]		--- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---			
[2021-10-30 23:50:59 657]			--- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---		
[2021-10-30 23:50:59 659]	Recuperando persona				
[2021-10-30 23:50:59 662]	Persona: 1 Juan Perez 500.0]				
[2021-10-30 23:50:59 664]				--- EXTRAER P1 (150)---	
[2021-10-30 23:50:59 666]					--- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---
[2021-10-30 23:50:59 666]			Recuperando persona 1		
[2021-10-30 23:50:59 667]		Recuperando persona 1			
[2021-10-30 23:50:59 669]	Extraer 150				
[2021-10-30 23:50:59 673]	Saldo actual: 350				
[2021-10-30 23:50:59 677]					Recuperando persona 1
[2021-10-30 23:50:59 679]			Persona recuperada: Persona: 1 Juan Perez 500.0]		
[2021-10-30 23:50:59 680]					Persona recuperada: Persona: 1 Juan Perez 500.0]
[2021-10-30 23:50:59 681]					Extraer 100
[2021-10-30 23:50:59 686]					Recuperando persona 2
[2021-10-30 23:50:59 689]					Persona: 2 Alma Almada 0.0]
[2021-10-30 23:50:59 690]				Recuperando persona	
[2021-10-30 23:50:59 694]				Persona: 1 Juan Perez 500.0]	
[2021-10-30 23:50:59 696]					Depositar 100
[2021-10-30 23:50:59 699]		Persona recuperada: Persona: 1 Juan Perez 500.0]			
[2021-10-30 23:50:59 700]		Extraer 100			
[2021-10-30 23:50:59 703]		Recuperando persona 2			
[2021-10-30 23:50:59 705]		Persona: 2 Alma Almada 0.0]			
[2021-10-30 23:50:59 706]			Extraer 100		
[2021-10-30 23:50:59 710]			Recuperando persona 2		
[2021-10-30 23:50:59 712]		Depositar 100			
[2021-10-30 23:50:59 713]		Sleeping 5seg			
[2021-10-30 23:50:59 717]					Sleeping 5seg
[2021-10-30 23:50:59 718]				Extraer 150	
[2021-10-30 23:50:59 720]				Saldo actual: 350	
[2021-10-30 23:50:59 723]			Persona: 2 Alma Almada 0.0]		
[2021-10-30 23:50:59 726]			Depositar 100		
[2021-10-30 23:50:59 728]			Sleeping 5seg		

Tabulación de datos de la consola (Con Bloqueo)

Timeline	T0	T1	T2	T3	T4
[2021-10-30 23:47:23 667]		--- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---			
[2021-10-30 23:47:23 667]	--- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---				
[2021-10-30 23:47:23 668]			--- EXTRAER P1 (150)---		
[2021-10-30 23:47:23 670]		Recuperando persona 1			
[2021-10-30 23:47:23 671]				--- EXTRAER P1 (150)---	
[2021-10-30 23:47:23 673]	Recuperando persona 1				
[2021-10-30 23:47:23 674]					--- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---
[2021-10-30 23:47:23 681]					Recuperando persona 1
[2021-10-30 23:47:23 685]				Recuperando persona	
[2021-10-30 23:47:23 692]		Persona recuperada: Persona: 1 Juan Perez 500.0]			
[2021-10-30 23:47:23 692]			Recuperando persona		
[2021-10-30 23:47:23 701]		Extraer 100			
[2021-10-30 23:47:23 705]		Recuperando persona 2			
[2021-10-30 23:47:23 722]		Persona: 2 Alma Almada 0.0]			
[2021-10-30 23:47:23 724]		Depositar 100			
[2021-10-30 23:47:23 726]		Sleeping 5seg			
[2021-10-30 23:47:28 750]					Persona recuperada: Persona: 1 Juan Perez 400.0]
[2021-10-30 23:47:28 751]					Extraer 100
[2021-10-30 23:47:28 753]					Recuperando persona 2
[2021-10-30 23:47:28 759]					Persona: 2 Alma Almada 100.0]
[2021-10-30 23:47:28 760]					Depositar 100
[2021-10-30 23:47:28 762]					Sleeping 5seg
[2021-10-30 23:47:33 783]			Persona: 1 Juan Perez 300.0]		
[2021-10-30 23:47:33 785]			Extraer 150		
[2021-10-30 23:47:33 787]			Saldo actual: 150		
[2021-10-30 23:47:33 800]	Persona recuperada: Persona: 1 Juan Perez 150.0]				
[2021-10-30 23:47:33 802]	Extraer 100				
[2021-10-30 23:47:33 804]	Recuperando persona 2				
[2021-10-30 23:47:33 811]	Persona: 2 Alma Almada 200.0]				
[2021-10-30 23:47:33 812]	Depositar 100				
[2021-10-30 23:47:33 814]	Sleeping 5seg				
[2021-10-30 23:47:38 842]				Persona: 1 Juan Perez 50.0]	
[2021-10-30 23:47:38 844]				Extraer 150	

Pregunta de Desafio (Sin Bloqueo):

El estado inicial de las cuentas son persona 1: 500 y persona 2: 0. Luego de realizar las cinco transacciones correspondientes las cuales son (--- EXTRAER P1 (150)---, -- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---, --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---, --- EXTRAER P1 (150)---, --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---).

Al Ejecutar el programa sin bloqueos, el resultado final es: Estado Final Persona 1: 400, Persona 2: 100, el cual es un resultado inconsistente ya que se esperaba que al finalizar las cinco transacciones la Persona 1 tenga saldo un saldo insuficiente al realizar las transacciones y la Persona 2 tenga un saldo de 300 (3 operaciones de DEPOSITAR P2), en cambio solo se ejecuto una transacción de --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)--- que dió como resultado el estado final. Esto se debe a que hubieron transacciones que hicieron caso omiso a lo que estaban haciendo las demás transacciones, solo se refleja la actualización de la última transacción que se ejecuto, las otras fueron ignoradas.

Específicamente se debe a que la T2 predomino en la ejecución del programa, sin considerar al final a las T0,T1,T3,T4.

Pregunta de Desafio (Con Bloqueo):

El estado inicial de las cuentras son persona 1: y persona 2: . Luego de realizar las cinco transacciones correspondientes las cuales son --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---, --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---, --- EXTRAER P1 (150)---, --- EXTRAER P1 (150)---, --- EXTRAER P1 (100) Y DEPOSITAR P2 (100)---.

Al Ejecutar el programa con bloqueos, el resultado final es : Estado Final Persona 1: 50, Persona 2: 300, el cual es un resultado consistente ya que la persona 1 tiene saldo 500 inicialmente y se intenta extraer un total de 600.

Específicamente se debe a que la T3 al intentar realizar la operación de --- EXTRAER P1 (150)--- da como resultado un Rollback, a causa de que la cuenta P1 posee solo un saldo de 50 (Saldo Insuficiente), ya que se van ejecutando las transacciones una por una (con bloqueo). Además que las transacciones que implican depositar se ejecutaron correctamente (Persona 2: 300)

Codigo Fuente para generar el Pdf en: <https://github.com/MateoGuillen/distrtp7>