### Outline

- Q1: Conflict-serializability Vs. Serializability.
- Q2: Schedule feasibilgymother Packingt Exam Help

• Q3: Isolation levels. https://powcoder.com

Add WeChat powcoder

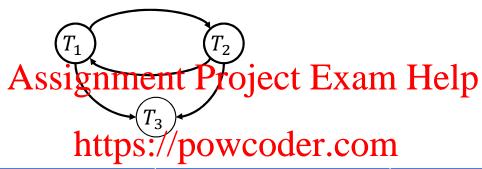
## Q1: Check conflict-serializability (a)

• For the given schedule, determine if it is conflict serializable or not.

#### Assignment Project Exam Help

Transaction T1	Transaction T2	Transaction T3
r(a) $Add$	WeChat powcod	ler
	W(A)	
W(A)		
		W(A)

## A1: Check conflict-serializability (a)



Transaction T1	Transaction T2	Transaction T3
r(a) Add	WeChat powcod	ler
	W(A)	
W(A)		
		W(A)

### Q1: Check serializability? (b)

• For the given schedule, determine if it is serializable or not.

#### Assignment Project Exam Help

Transaction T1	Transaction T2	Transaction T3
r(a) $Add$	WeChat powcod	ler
	W(A)	
W(A)		
		W(A)

## A1: Check serializability? (b)

Given schedule

Transaction T1	Transaction T2	Transaction T3
Assignme	nt Project Exam	n Help
W(A)		
https:	//powcoder.com	N(A)

### Add WeChat powcoder

A serial schedule

Transaction T1	Transaction T2	Transaction T3
R(A)		
W(A)		
	W(A)	
		W(A)

#### What is the difference?

•	T1	reads	the	same	value	of A
		LCUUS		Julic	value	OI A.

		K(A)	
•	T2, T3 write the values signment P	roject Ex	am Help

W(A)

 After all operations, databatepsn//powcoder.com the same state -> A written by T3.

#### Add WeChat powcoder

**Transaction T1** 

Blind write by T3.

Both schedules are equivalent – yet not conflict-equivalent.

Serializable!

Transaction T1	Transaction T2	Transaction T3
R(A)		
W(A)		
	W(A)	
		W(A)

**Transaction T2** 

**Transaction T3** 

W(A)

- For the schedule below, determine if it is possible to execute under strict 2 PL.
- If so: Show a placent of the following the second (Rel)

Transaction T1	Transaction T2	Transaction T3
r(a) $Add$	WeChat powcod	ler
	R(A)	
R(B)		
		W(A)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
SASSI gnme	nt Project Exam	Help
R(B) https:	//powcoder.com	1
w(B) Add	WeChat powcod	ler W(A)
	_	R(B)

Transaction T1	Transaction T2	Transaction T3
SASSIgnme	nt Project Exam	n Help
https:	//powc@der.com Rel(A)	1
R(B) Add	WeChat powcod	ler
	ı	W(A)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
SASSI gnme	nt Project Exam	Help
https:	//powcroder.com Rel(A)	1
Slock(B) Add N	WeChat powcod	ler
		W(A)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
SASSIgnme R(A)Signme	nt Project Exam	n Help
_	//powck(A)  Rel(A)	
Slock(B) Add N	WeChat powcod	ler
		Xlock(A)? -> Must happen before W(B) by T1. Lock held by A. W(A)
W(B)		
		R(B)

- For the schedule below, determine if it is possible to execute under strict 2 PL.
- If so: Show a place of got of the leases (Rel)

Transaction T1	Transaction T2	Transaction T3
r(a) $Add$	WeChat powcod	ler
	R(A)	
R(B)		
		R(A)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
Slock(A)  Assignment	ent Project Exar	n Help
	R(A)	<b>r</b>
R(B) https	://powcoder.com	n
nup.	m powedation	R(A)
W(B) Add	WeChat powco	der
Tidd	Weenat power	R(B)

Transaction T1	Transaction T2	Transaction T3
Slock(A)	ont Droject Exer	n Holn
Arssignin	ent Project Exar	п негр
	` ,	
https	:://powiciader.com	n
R(B)		
Add	WeChat powco	der r(a)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
Slock(A)  Arrivation Slock(A)	ent Project Exar	n Help
	Slock(A) S://powkender.com	
Slock(B) R(B) Add	WeChat powco	der
	1	R(A)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
Slock(A)  Assignm	ent Project Exar	n Help
	Slock(A) S://powkerder.com	
Slock(B) R(B) Add	WeChat powco	der
	1	Slock(A) R(A)
W(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
Slock(A)  **Signmonth**	ent Project Exar	n Help
	Slock(A) R(A) R(A) COLUMN	•
Slock(B) R(B) Add	WeChat powco	der
	1	Slock(A) R(A)
Xlock(B) W(B) Rel(A) Rel(B)		
		R(B)

Transaction T1	Transaction T2	Transaction T3
Slock(A)  Assignm	ent Project Exar	n Help
•	Slock(A) S://pow <sub>fe(A)</sub> der.com	•
Slock(B) R(B) Add	WeChat powco	der
	<b>.</b>	Slock(A) R(A)
Xlock(B) W(B) Rel(A) Rel(B)		
		Slock(B) R(B) Rel(A) Rel(B)

- For the schedule below, determine the isolation levels under which the given schedule can successfully execute. Assignment Project Exam Help

  • Possible levels: READ UNCOMMITTED, READ COMMITTED, REPEATABLE READ

Transaction T1	Transaction T2	Transaction T3
r(a) $Add$	WeChat powcod	ler
	R(B)	
		R(C)
W(A)		
	W(B)	
		W(C)

- The schedule has no dependencies among transactions.
- READ COMMITTED Agnot BEPFEATAPLE PREAD etc Texain Help

Transaction T1	Transaction T2	Transaction T3
r(a) $\operatorname{Add}$	WeChat powcod	ler
	R(B)	
		R(C)
W(A)		
	W(B)	
		W(C)

• For the schedule below, determine the isolation levels under which the given schedule can successfully execute. Assignment Project Exam Help

https://powo	coder:cotin T2
Add WeCha	at powcoder R(B)
	W(B)
R(B)	
W(B)	
	R(C)
	W(C)

READ UNCOMMITTED -> not possible since both transactions involve reads and writes.
 Assignment Project Exam Help

https://powo	oder:cotin T2
R(A)	
Add WeCha	at powcoder
	R(B)
	W(B)
R(B)	
W(B)	
	R(C)
	W(C)

A3: Isolation levels (b)	Transaction T1	Transaction T2
	Slock(A)	
	R(A)	
	Rel(A)	
	W(A)	
Check READ COMMITTENENT Projection	ect Exam Help	R(B)
<ul> <li>Place locks one by one according</li> </ul>		W(B)
to the rules. https://powc	oder.com	
	W(B)	
Add WeCha	t powcoder	R(C)
		W(C)

A3: Isolation levels (b)	Transaction T1	Transaction T2
7.5. 1501dt1011 1C vC15 (b)	SIOCK(A)	
	R(A) Rel(A)	
	· ,	
	Xlock(A)	
• Check READ COM MITTED nmen	t Project Exam Help	
<ul> <li>Place locks one by one according to the rules.</li> </ul>	3	R(B)
	nowcoder.com	W(B)
	R(B)	
Add W	VeChat powcoder	
ridd weena	cenat poweoder	R(C)
		W(C)

A3: Isolation	levels (h)	Transaction T1	Transaction T2
AJ. IJOIdtion Tevels (b)	Slock(A)		
		R(A)	
		Rel(A)	
		Xlock(A)	
• Check READ COMMIS	<b>Signment Project</b>	ect Exam Help	
<ul> <li>Place locks one by one</li> </ul>		1	Slock(B)
•		- d	R(B)
to the rules. https://powc	oder.com	Rel(B)	
			W(B)
	Add WeCha	t powcoder	
		W(B)	
			R(C)
			W(C)

A3: Isolation levels (b)	Transaction T1	Transaction T2	
/\J. 1301acioii 1	icvers (b)	Slock(A)	
		R(A)	
		Rel(A)	
		Xlock(A)	
• Check READ COMMING	<b>Egnment Proj</b>	ect Exam Help	
<ul> <li>Place locks one by one according</li> </ul>	•	Slock(B)	
to the rules.	https://powc	oder.com	R(B) Rel(B)
			` ,
	Add WeCha	t powcoder	Xlock(B) W(B)
		R(B)	
		W(B)	
			R(C)
			W(C)

Transaction T1	Transaction T2
Slock(A) R(A) Rel(A)	
xlock(A) ect Exam Help	
1	Slock(B)

R(B)

Rel(B)

• Check READ COMMISSEGNMENT Project Exam Help

• Slock(B) by T1 is not possible since T2 will not release lock **at Bpill:**//powcoder.com commits.

Add WeChat powcoder

 This implies READ COMMITTED and REPEATABLE READ are not possible.

 NOTE: Schedules T1 and T2 are conflict-serializable.

t powcoder	Xlock(B) W(B)
Slock(B)? – Not possible R(B)	
W(B)	
	R(C)
	W(C)