



INSTITUTION OF TECHNOLOGY OF CAMBODIA



DEPARTMENT: GIC I4-B

Report of Operating System

Topic : Deadlock

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With result without deadlock

```
• thongking@Ubuntuzuuki:~/Documents/I4-GIC/OS-Course$ javac DeadlockFreeSimulation.java && java DeadlockFreeSimulation
Starting threads...
[T1] wants 100 from account1 → account2
[T2] wants 200 from account2 → account1
[T2] locking account1
[T1] locking account1
[T2] locked account1
[T2] locking account2
[T2] locked account2
[T2] transferred 200: account2=800, account1=1200
[T2] released account2
[T1] locked account1
[T2] released account1
[T1] locking account2
[T1] locked account2
[T1] transferred 100: account1=1100, account2=900
[T1] released account2
[T1] released account1
Completed without deadlock.
Final: BankAccount{name='account1', balance=1100} | BankAccount{name='account2', balance=900}
✧ thongking@Ubuntuzuuki:~/Documents/I4-GIC/OS-Course$
```

With result with deadlock

```
⌚ thongking@Ubuntuzuuki:~/Documents/I4-GIC/OS-Course$ /usr/bin/env /usr/lib/jvm/java-25-openjdk-amd64/bin/java --enable-pre
lsInExceptionMessages -cp /home/thongking/.config/Code/User/workspaceStorage/7ed0c78cb0816f24509406019f185271/redhat.java/
10/bin DeadlockSimulation
Starting threads...
If it deadlocks, it will freeze after both threads lock one account.
Use Ctrl+C to stop.
[T2] wants 200 from account2 → account1
[T1] wants 100 from account1 → account2
[T2] locking account2
[T1] locking account1
[T2] locked account2
[T1] locked account1
[T1] locking account2
[T2] locking account1
T@
T1
✧ ^Cthongking@Ubuntuzuuki:~/Documents/I4-GIC/OS-Course$ |
```

Git URL : <https://github.com/Th3ngSer/OS-Lab.git>

