

**جــامـعـة الإسراء الخــاصــة**

**كـليـة تكـنولوجيـا المعلومـات**

**Isra University**

**Faculty of IT**



**First Semester 2023/2024**

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| Course Title: | **Course No.: Commands (create table and Data types)** | **HW No : 2** |
| **Submitted to: Dr. Maher Abuhamdeh** | | |
| **Student Number: Ad0039** | **Student Name: فراس سمير سليم** | **Date: 12/01/2024** |

**Write technical report to show the algorithm that make starvation between two algorithm**

**Wound wait and wait die data base management system . Use cover page**

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**Starvation**

Starvation occurs when a transaction is continually denied access to a resource it needs to proceed, while other transactions are granted access. This can lead to a situation where a transaction is never able to complete, hindering the overall progress of the system.

**Wound Wait Algorithm**

The Wound Wait algorithm is a type of optimistic concurrency control. It allows a transaction to proceed with its execution, but if it detects a potential conflict with another transaction, it may wound (roll back) the conflicting transaction. This ensures that a higher-priority transaction is given precedence.

**Wait Die Algorithm**

The Wait Die algorithm is a pessimistic concurrency control algorithm. It grants access to a transaction based on its priority, and if a lower-priority transaction requests a resource held by a higher-priority transaction, the lower-priority transaction is made to wait (if the higher-priority transaction is active) or be aborted (if the higher-priority transaction is waiting).

**Starvation in Wound Wait VS Wait Die**

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| --- | --- |
| Wound Wait | Wait Die |
| **Wound Wait can lead to starvation when lower-priority transactions repeatedly wound higher-priority transactions. If a transaction with lower priority continually interferes with transactions of higher priority, those high-priority transactions may never be able to complete successfully, resulting in starvation.** | **Starvation in Wait Die occurs when a high-priority transaction is repeatedly aborted due to conflicts with low-priority transactions. If a high-priority transaction keeps getting aborted, it may be unable to make progress, resulting in starvation.** |