

## Method 1: Basic Deletion

cypher

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```
MATCH (u:User)
WHERE u.id > 10
DETACH DELETE u
```

- `DETACH DELETE` removes the node **and all its relationships** (avoids orphaned relationships)

## Method 2: Batch Deletion (For Large Datasets)

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```
MATCH (u:User)
WHERE u.id > 10
CALL {
  WITH u
  DETACH DELETE u
} IN TRANSACTIONS OF 1000 ROWS
```

- Processes deletions in batches (prevents memory overload)

## Method 3: Using Parameters (Dynamic Threshold)

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```
:param minId => 10;
MATCH (u:User)
WHERE u.id > $minId
DETACH DELETE u
```

## Method 4: Delete Only If No Relationships Exist

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```
MATCH (u:User)
WHERE u.id > 10 AND NOT (u)--()
DELETE u
```

## Verification After Deletion

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```
MATCH (u:User)
WHERE u.id > 10
RETURN count(u) AS remainingUsers
```

(Should return 0 if deletion was successful)

## Common Issues & Fixes

1. **"Cannot delete node with relationships"** → Use `DETACH DELETE` instead of `DELETE`
2. **Timeout errors** → Use batch deletion ( `IN TRANSACTIONS` )
3. **Case sensitivity** → Ensure property name matches ( `id` vs `ID` )