Assignment 1: Which types of executing transactions exist? Which effects and goals do the different types of execution have?

Assignment 2: Explain the principle of the Lock-Unock model. Which of the following executions is correct? Do the schedules ensure consistency?

<table>
<thead>
<tr>
<th></th>
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<th>b</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>lock A</td>
<td>lock A</td>
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<tr>
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<td>unlock A</td>
<td>unlock A</td>
<td>unlock A</td>
</tr>
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<tr>
<td>T1</td>
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<td></td>
<td>unlock C</td>
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</tbody>
</table>

Assignment 3: Explain the Read/Write-model.

Assignment 4: What is a scheduler? Which tasks does a scheduler fulfill?

Assignment 5: Formally define a schedule. In addition, formally define the following concepts in suitable order: serial schedule, complete schedule, complete transaction, \( SHUFFLE(T) \) and transaction.
Assignment 6: Consider the following set of transactions $T$:

\[
T := \{T_1, T_2\} \\
T_1 := r_1(x)w_1(x)c_1 \\
T_2 := r_2(x)r_2(y)w_2(y)c_2
\]

Are the following operator sequences $s_i$ schedules per definition? If so, are the schedules serial or complete?

\[
s_1 := r_1(x)r_2(x)r_2(y)w_1(x)w_2(y) \\
s_2 := r_1(x) \\
s_3 := r_2(x)r_1(x)w_2(y)r_2(y)w_1(x) \\
s_4 := r_2(x)r_2(y)r_1(x)w_1(x)c_1w_2(y)c_2 \\
s_5 := r_2(x)r_2(y)r_1(x)w_1(x)r_2(y)w_2(y)c_1c_2 \\
s_6 := r_2(x)r_2(y)w_2(y)c_2r_1(x)w_1(x)c_1
\]

Assignment 7: Explain the concept of serializability.