

# CSC365

## Assignment 4 - Part 1

The Part 2 will be out on coming Thursday..

Q1[10 points]. Create the precedence graph for the schedule:  $w_1(X)$ ,  $r_1(X)$ ,  $w_2(Y)$ ,  $r_3(X)$ ,  $w_1(Y)$ ,  $w_1(X)$ . Based on the graph, determine whether the schedule is conflict-serializable.

Q2[10 points]. What is the difference between serializable and conflict-serializable schedule. What is the relation between the two (is one of them a subset of the other)?

Q3[10 points]. Consider the following schedule:

$r_1(A); r_2(B); ???; w_1(C); w_2(A);$

What value for ??? will make the schedule not conflict-serializable. Give one such possible value.

Q4[20 points]. Consider the transactions  $T_1$  and  $T_2$ .

$T_1 : r_1(A); w_1(A); r_1(B); w_1(B);$

$T_2 : r_2(B); w_2(B); r_2(A); w_2(A);$

Give an example of a conflict-serializable schedule and non conflict-serializable schedule for the eight actions.

Q5[20 points]. Are the following schedules conflict-serializable?

a)  $r_1(A); w_1(B); r_2(B); w_2(C); r_3(C); w_3(A);$

b)  $w_3(A); r_1(A); w_1(B); r_2(B); w_2(C); r_3(C);$

## Submission

Please submit your work as a PDF file to polylearn OR hand in your work to me in person (you can do so on the final exam's day).