

## TP Activity 1: (10 minutes)

### Tourist Bus Scheduling: The Direct Way

#### Tourist Problem Version 1.0

**Given:** A list of tourist, each with his/her list of places to visit.

**To do:** Schedule bus rides for them so that

each tourist visits all the places in his/her list, and

C1: Each tourist visits *at most one place a day*,

C2: There is *at most one bus trip to each place*, and

C3: *minimize* the number of days to complete mission.

#### An Instance of Tourist Problem

<b>Tourist</b>	<b>Places of Interest</b>
Aaron	SZG, BG, JB
Betty	CG, JG, BG
Cathy	VC, SI, OR
David	JG, CG, OR
Evans	CG, JG, SZG

#### Note the conflicts:

##### On same day:

\* Cannot schedule BG and JB  
(Aaron wants to visit both)

\* Can schedule SZG and OR  
(nobody want to visit both)

To schedule P1, P2, P3 on same day:

must check no conflict between

P1—P2, P2—P3, P1—P3;

**Q1:** Using the above information, try to schedule the bus trips.

Make sure to check *all* the conflicts.

(You want to minimize the # days needed to complete all the bus trips.)

Day 1: \_\_\_\_\_

Day 2: \_\_\_\_\_

Day 3: \_\_\_\_\_

Day 4: \_\_\_\_\_

Day 5: \_\_\_\_\_

**Q2:** Describe the key idea you used when you do the scheduling?