Design Is Everywhere (11-18)

11	12	13	14	15	16	17	18
M Oct 15	W Oct 17	M Oct 22	W Oct 24	M Oct 29	W Halloween!	M Nov 5	W Nov 7
Creativity	**Project Management**	**Sanjay Sarma Guest Lecture**	**Presentation Skills**	**Group Project Success**	**Innovation & Ethics** **Build a Company**	**Individual Presentations**	**Individual Presentations**
Assign Individual Project				Start Group Projects/Assign Groups			Read Selection from High-Velocity Edge
Make a commercial	Down-Selected Ideas	Project Management Plan, K-Scripts	Detailed Design Doc (T1 R1 H)	Usability test 1 for IP on functional system		Individual Presentations, UT 2 for IP	Individual Presentations

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Group Project/Interdisciplinary Design (19-27)

19	20	21	22	23	24	25	26	27
W Nov 14	M Nov 19	W Nov 21	M Nov 26	W Nov 28	M Dec 3	W Dec 5	M Dec 10	W Dec 12
Buy or Build, Process Improvement	**Group Project Review Session**	**Helvetica**	**Guest Lecture (Harker)**	**Guest Lecture/Work-Class**	**Guest Lecture (Helfrich)**	**Guest Lecture/Work-Class**	**Group Project Preso.**	**Group Project Preso.**
Down-Selected Ideas/Reading	Project Management Plan, K-Scripts		Detailed Design Document		Usability test 1 for GP		Usability test 2 for GP/Preso.	Presos

Grading

- Pop quizzes 10%
- Homework 25%
- Projects 55%
  - Individual 25% of total grade
  - Group 30% of total grade
- Attendance, Participation 10%

Group Project Success

project planning

brainstorming

October 31, 2012

Information

- You and your two roommates are part of the Student Engineering Team. The other seven members of the team were at the National Student Engineering Competition and are flying home at 4:30 p.m. with a trophy. The whole team will have a celebratory dinner at your place at 6 p.m. It is now 2:30 p.m.

- Sequence the tasks so the whole team can eat a hot dinner at 6 p.m. (You might consider a flow diagram)

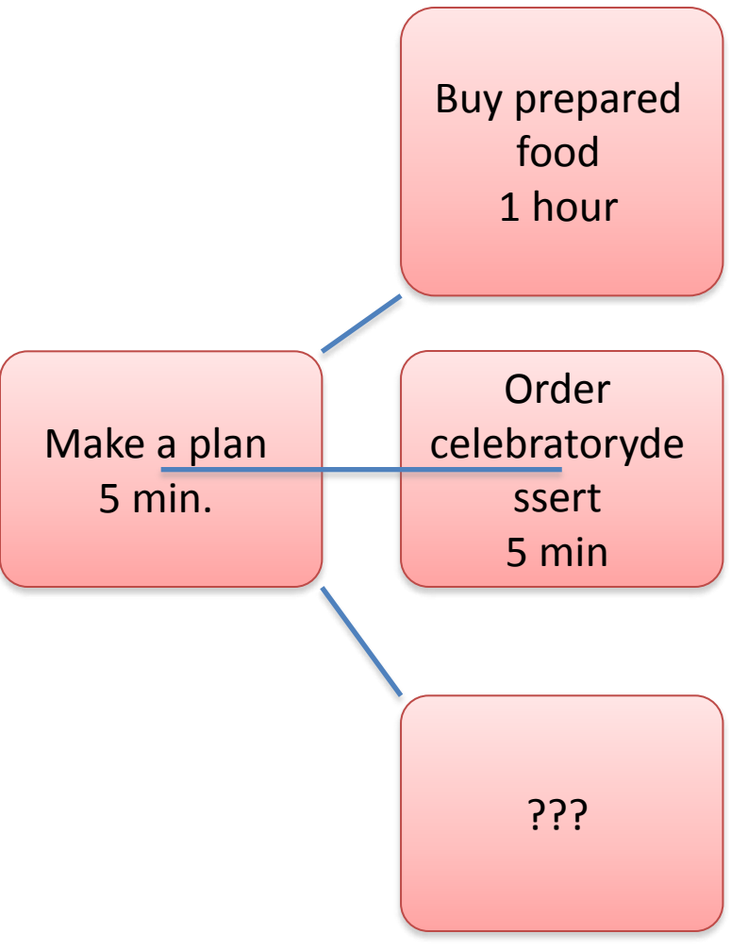
Tasks in alphabetical order

- Bake Dish A (in the oven) – 90 minutes
- Buy prepared food at grocery store (needs to be heated) – 1 hour
- Find a seven-passenger vehicle to rent or borrow to pick up team at airport - 15 minutes
- Heat Dish B (on the stovetop) – 30 minutes
- Heat Dish C (in the microwave) – 15 minutes
- Make a plan for who does what when – 5 minutes
- Obtain the seven-passenger vehicle from the rental company or friend – 30 minutes
- Order celebratory dessert from the bakery (takes two hours to make) – 5 minutes
- Pick up celebratory dessert at the bakery (bakery is in the opposite direction from airport) – 1 hour
- Pick up teammates at the airport; a 1 hour drive each way (plane lands at 4:30 p.m.) – 2 hours

Brief Steps of Project Planning

- Identify the goal
- Identify tasks and their times
- Sequence tasks
- Decide who will do what

Sequence



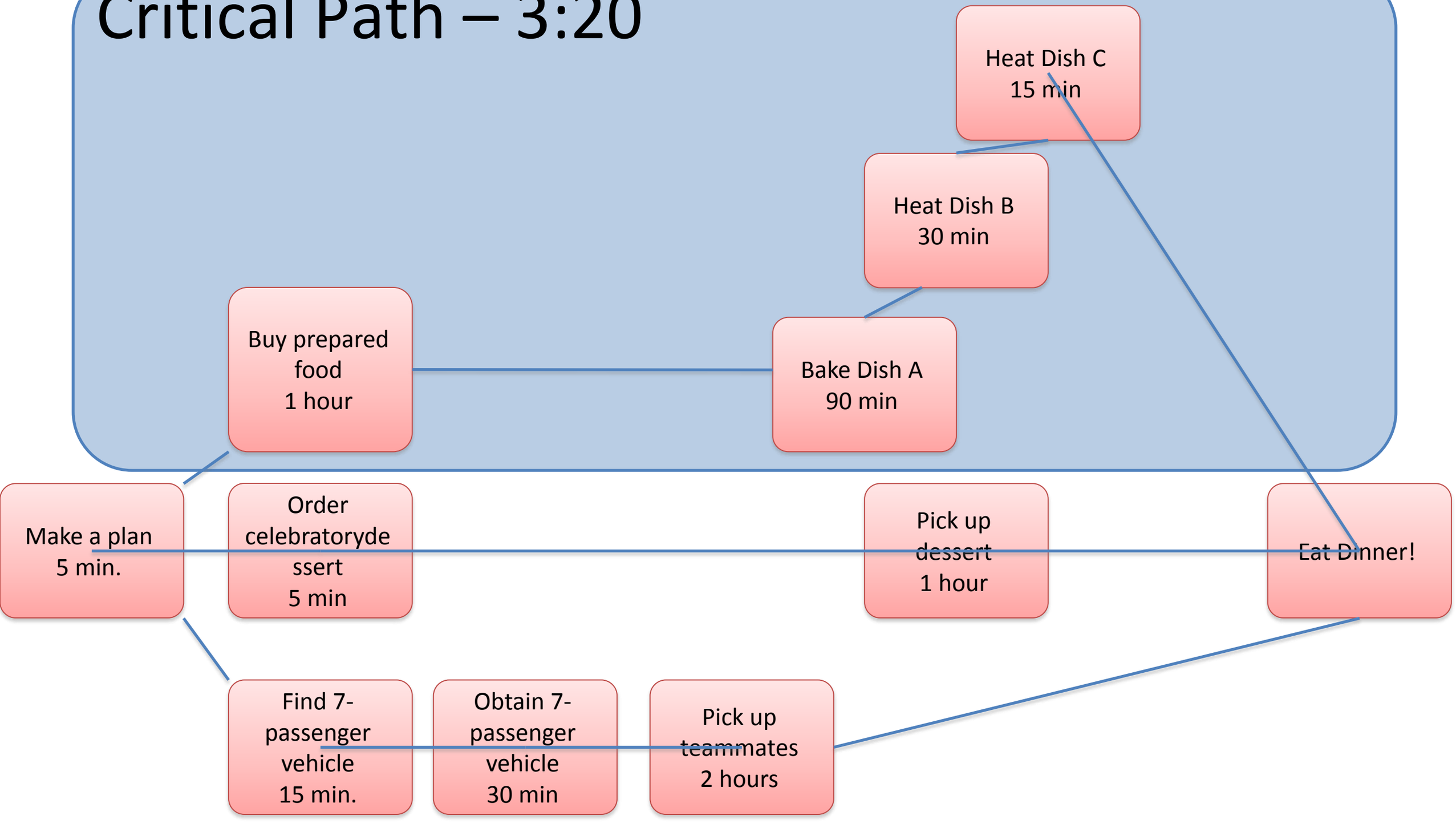
You

Roommate 1

Roommate 2

Give it a try!

Critical Path – 3:20



Factors of Team Effectiveness

- Decision-making
- Abilities within the team
- Team roles
- Communications
- Tasks
- Meetings
- Norms and expectations

Team Contract

One way to get a team working well and successfully together is to agree on a team contract that addresses these topics

- Norms and expectations
- Decisions
- Abilities within the team
- Team roles
- Communications
- Tasks
- Meetings

Give it a try!

Apply this to your project: Steps of Project Engineering

- Consider the project as a whole – what constitutes success?
- Identify tasks
- Identify sequence among tasks
- Identify the human, financial and other resources for tasks, and assign tasks and associated budget
- Estimate the time for tasks, and with sequence estimate schedule and “critical path”
- Decide how to control schedule, and what to do when you fall behind

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Fall 2012