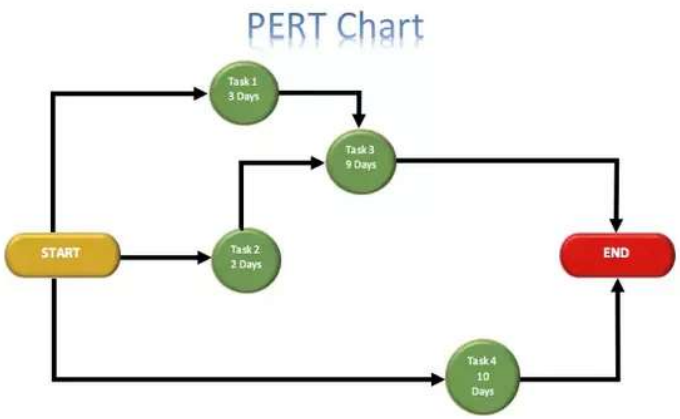
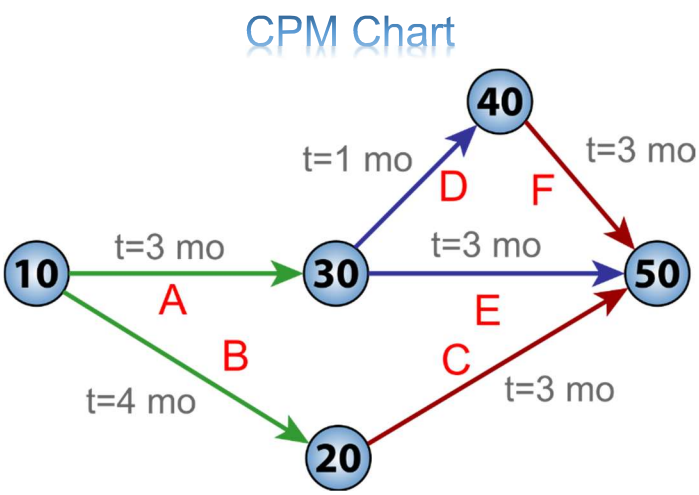
Making a PERT/CPM Chart

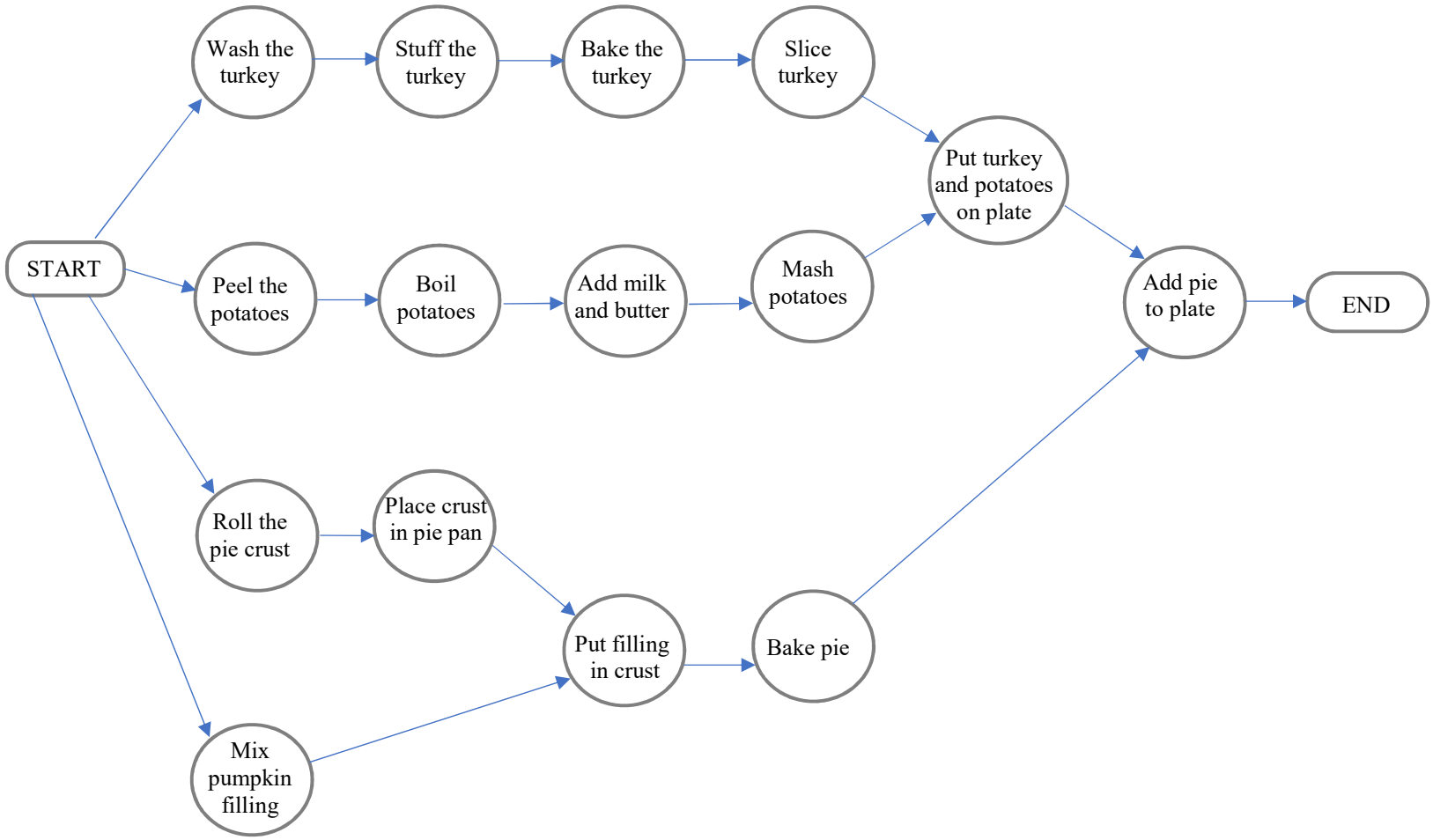
A PERT chart is a project management tool used to schedule, organize, and coordinate tasks within a project. PERT stands for Program Evaluation Review Technique and it was invented by the Navy in the 1950s.

The critical path method (CPM) is a step-by-step project management technique for process planning that defines critical and non-critical tasks. It's used to figure out the minimum time necessary for completing a complex project, and it helps engineers determine which steps to modify to make the project take less time. It was invented by DuPont in the 1950s.





Thanksgiving Dinner



Chemical Engineering Project 1

Design a food processing plant that makes sponge cupcakes.

- You have to design a method for separating the eggs. You will demonstrate it in class.
- You have to prepare a poster size PERT/CPM chart showing all the steps for your procedure.
- You have to make a batch of cupcakes using your procedure. Your cupcakes will be taste tested.

Basic Sponge Cake

3 eggs, separated
¾ cup sugar
¾ cup all-purpose flour
¼ teaspoon salt
¼ cup warm water
½ teaspoon vanilla extract

1. Separate eggs.
2. Beat the egg whites until soft peaks form.
3. Slowly add ¼ of the sugar to the egg whites.
4. In a separate bowl, beat the egg yolks until slightly thick.
5. Add the flour, salt, ½ cup sugar, water, and vanilla to the egg yolks.
6. Gently fold the egg whites into the egg yolks. Fold until well-mixed.
7. Use a spoon or ice cream scoop to fill cupcake liners with batter.
8. Bake at 350 degrees for 15 - 18 minutes.

Possible Modifications:

- Add orange zest or lemon zest
- Use orange juice, lemon juice, or milk instead of water
- Use gluten-free flour
- Add ¼ teaspoon of cream of tartar to the egg whites before they are beaten