

# Activity: Network Diagram

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**Goal:** Creating a network diagram and optimizing it is a key competency in the foundational PM course. Students typically enjoy doing this assignment. There is opportunity to record the “cooking dinner” using a smart phone so that some activities are displayed in a visual manner.

**Date Due:** \_\_\_\_\_

Please make sure a title page is included that details your name, student number, Cardiff University.

This is an individual assignment. Group work is NOT allowed. **Please make sure you read, understand and follow the rules on unfair practice and plagiarism** in your University Handbook that you were given at the start of the course. Absolutely every single case of unfair practice will be dealt with according to the University Regulations, no exceptions, no negotiation. You have been politely warned.

This assignment requires you to use project management techniques to analyse a common task – Cooking Dinner. I will leave it up to you to decide what recipe to analyse. However, in order to grade your work you will need to provide, as part of your submission, a printout of the recipe you based your assignment on. Please ensure that this printout is complete, details the URL from which it is available, and that all the text is viewable on the page (it may help if you print it out in landscape mode).

As there are thousands of recipes available and this assignment is individual work, then I expect to see a different recipe for each assignment submitted. Do not use the same recipe as your colleagues.

In order to ensure that everyone is using a different recipe, you must email your choice of recipe as soon as you have decided upon it. This email should contain your name, your choice of recipe (name of the recipe), the web address (the URL) that the recipe is available from, your email address and your student number. You will be assigned the recipe you have chosen on a *First Come, First Served* basis. Recipes must be chosen from the [www.bbc.co.uk/food/](http://www.bbc.co.uk/food/) website. Any recipe requests sent directly to me will be simply ignored, so do not send them to me.

**You must send your recipe request before: date and time.** If you fail to notify us of your recipe on time or if you do not analyse the recipe that was allocated to you, you will receive zero marks for this assignment. Please note, the later you do this, the less time you will have to complete the assignment. You must stick to the first recipe you are allocated, and you should request your recipe allocation as soon as possible. **Allow at least 3 working days for us to confirm your recipe allocation.** Do not start your assignment until you have received a confirmation.

The selection of an appropriate recipe to complete this task needs careful thought. The recipe should not be too simple as otherwise it will be hard to find improvements in its execution. At the same time, if the recipe is too complex, you may be overwhelmed by the detail required. Also remember that you may need to get things (dishes, utensils and ingredients) out of storage locations and clean and tidy your kitchen. If a time is not allocated to a task in the recipe, use a realistic estimate or cook the recipe yourself and time the duration of each activity.

The assignment can be generated with either the use of computer graphics packages (such as PowerPoint, Word or Corel Draw that are available on the university network or it can be completed in by hand. In either case, marks will be awarded for presentation.

### Assignment Question.

- 1) Draw a project network diagram of your recipe when it is cooked by ONE person only.
- 2) Complete the forward and backwards analysis and identify the critical path in the project network diagram drawn to answer question 1. How long will the recipe take to complete?
- 3) Draw a project network diagram of your recipe when it is cooked by TWO people. Complete the forwards and backwards analysis and identify the critical path in this project network diagram.
- 4) Draw a Gantt Chart of the project network diagrams drawn in part 1 and in part 3.
- 5) Discuss the strengths and weakness of the Project Network Diagrams and Gantt Charts for describing and analysing your recipe.

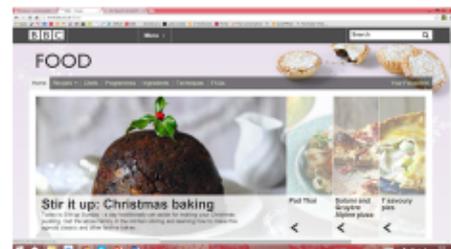
**Please note.** You should use the *activity-on-arrow* network diagram technique as was taught in the Operations Management class (not the *activity-on-node* technique that you may have been taught elsewhere).

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Slide used by the Professor to Introduce the Activity.

## Assignment: Cooking dinner

1. Draw a project network diagram of your recipe when it is cooked by one person only.
2. Complete the forward and backwards analysis and identify the critical path in the project network diagram drawn to answer question 1. How long will the recipe take to complete?
3. Draw a project network diagram of your recipe when it is cooked by TWO people. Complete the forwards and backwards analysis and identify the critical path in this project network diagram
4. Draw a Gantt Chart of the project network diagrams drawn in part 1 and in part 3.
5. Discuss the strengths and weakness of the Project Network Diagrams and Gantt Charts for describing and analysing your recipe.



### Fragrant beef with peppers

