

Instructions

Welcome to the instructions to format your excel for use in A.N.T.S. While we would have liked it to be simple, due to some unknown error, you will need to modify your current existing excel file. This set of instructions is here to help guide you through.

Step 1: Gathering your data

For demonstration purposes, we will guide the formatting of the excel with the following activities.

Activity	Duration	Resources	Predecessors	Cost per Unit of resource	Crash duration	Crash cost	Deadline
A	5	2	none	30	2	50	7
B	3	1	A	20	1	60	4
C	8	5	A,B	30	3	90	10

Fig1: Initial data you will require

Activity: This is the name of the activity for your project. For instance, if the project is building a house, an activity could be procurement of materials.

Duration: This refers to how long the activity takes. It is assumed to be in days

Resources: This refers to how much Resources that the activity requires. It is assumed to be in terms of labour

Predecessors: This refers to prior activities that need to be completed before the start of the activity. In our example, A has to be completed before B can begin. Similarly, both A and B have to be completed before C can begin.

Cost per unit of resource: This refers to the cost for each unit of resource used.

Crash duration: This refers to the fastest possible time that the activity can go with crashing. It is assumed to be in days.

Crash Cost: This refers to the cost of crashing for each day the activity is reduced. It is assumed to be in days.

Deadline: The maximum number of days within which an activity needs to be completed. For example: an activity A has a duration of 2 days, but a deadline of say 5 days. Say the earliest it can start is on day 1, however, one can choose to start the activity on day 3 as well. This would fall within the deadline. Please ensure that the deadline is bigger than the duration of the activity.

Step 2: Reformatting your data

As mentioned, due to some bugs in our code, we have to reformat our data accordingly. Figure 2 will show how the reformatted data should look like. In this example, we will be reformatting A.

Changes to columns

1) Resources:

For an activity using i resources, where i is a positive whole number, we change it to be resource*i*: i . This is done because our software has problems reading the resources column. It still means the same thing, where the activity will need i units of resources to be completed.

2) Cost per unit of resource:

An edit of the column name “Cost per unit of resource” to “Resources per unit cost”. This was an accidental oversight. No other changes are necessary.

Additional columns

- 1) For resource*i*: i , where i is a positive whole number, we will have to put in an additional column of “Cost per Unit of resource*i*”. We then fill in any number we want in the column. **THIS DOES NOT AFFECT ANY CALCULATIONS IN OUR SOFTWARE.** This is done because our software has problems reading the resources column.

Application

- 1) Since it uses 2 units of resource, we will need to change it to resource2:2.
- 2) We change the column of cost per unit of resource to resources per unit cost
- 3) We add a new column, “cost per unit of resource2” and fill the column with an arbitrary number, 40.

Repeat these steps for all activities.

Activity	Duration	Resources	Predecessors	Resources per unit cost	crash duration	crash cost	deadline	Cost per Unit of resource1	Cost per Unit of resource2	Cost per Unit of resource5
A	5	resource2:2	none	30	2	50	7	50	40	60
B	3	resource1:1	A	20	1	60	4	50	40	60
C	8	resource5:5	A,B	50	3	90	10	50	40	60

Fig2: Reformatted data

And that successfully reformats our data to one that will be usable for our ANTS software. Improvements and bug fixes need to be made, but we hope that you will have a fun time playing or testing with our software. Below is just some extra information.

Extra information:

- 1) If I had a pre-existing column, example, “cost per unit of resource2” and another activity has the same number of resources used, do I have to add another column, “cost per unit of resource2”?

Ans: No, you do not need to.

- 2) What if my resources used are none/0? Do I have to add another column?

Ans: Yes, yes you will need to. The new column, “cost per unit of resource0”

- 3) Are the letters case-sensitive?

Ans: Yes, please do pay careful mind when typing the new columns.

- 4) Who should I contact if my software does not work?

Ans: Please do reach out if you are experiencing difficulty with our software. If need be, we can deploy “technicians” to help ensure that the software is working to your satisfaction

We have included demo data in the folder for you to try out as well. We hope that you have a pleasant experience while using our beloved software!