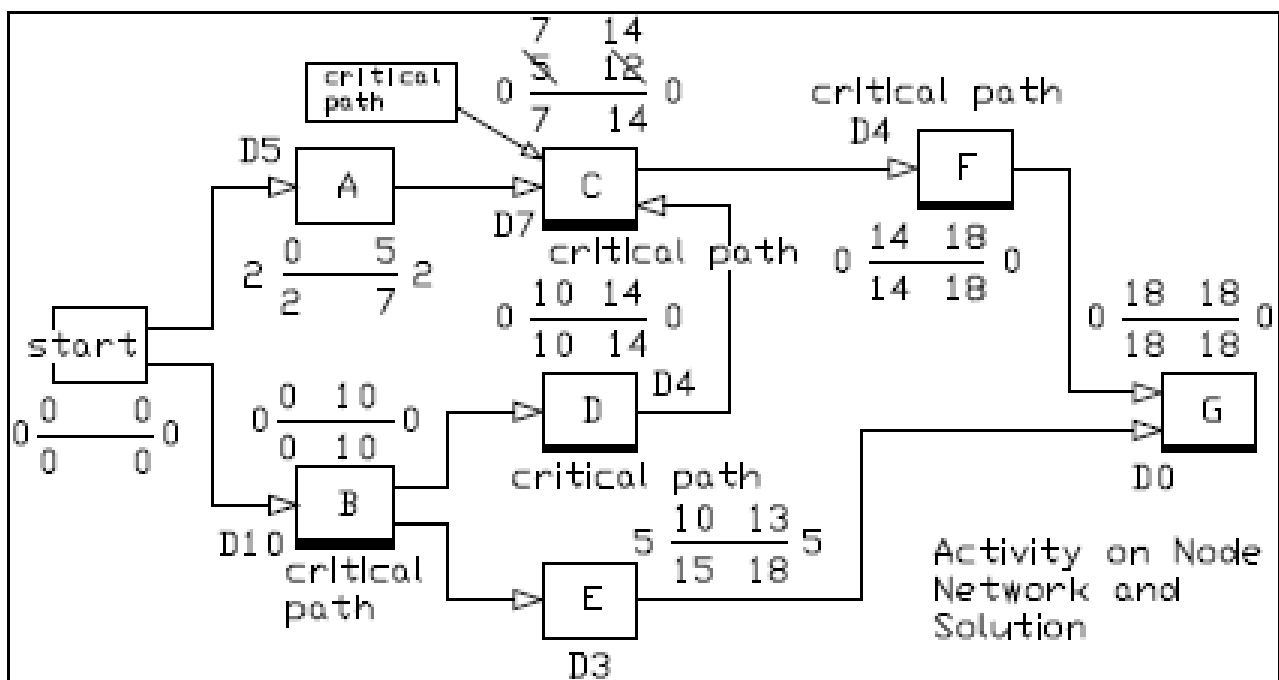## Network Diagram and Calendar

In this exercise we are going to enter a project with an end-to-end constraint.   We will enter data into the Gantt Chart and then make some changes using the Network Diagram view.

We will also look at defining and modifying the project calendar.

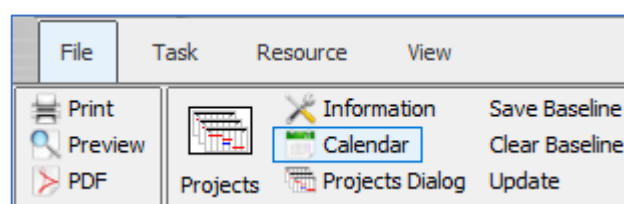The network we are using is as follows:

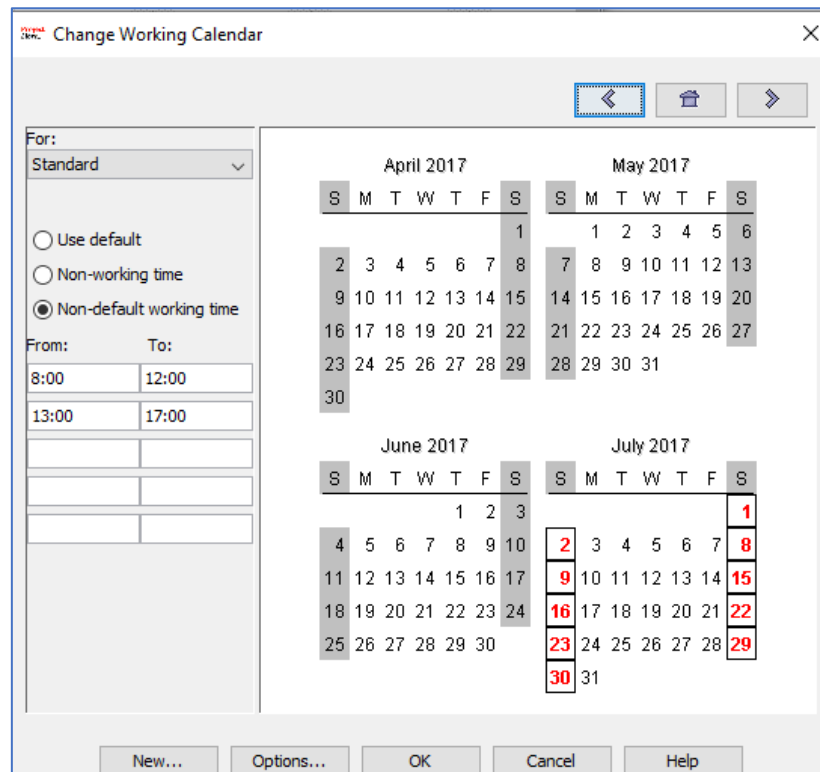### Activity on Node Network

Note the end-to-end constraint between Activity C and Activity D.

1. Create a new project in ProjectLibre.
    Call it "Network Project" with a start date of July 3rd, 2017.
    Forward Scheduled should be checked ✓

2. Setup the Project Calendar for July and August 2017 so that there are no weekends or holidays.

    On the *File* tab, click on the *Change Working Calendar* button.

3.   Scroll [image] to July 2017 and select the weekend dates (you can select multiple dates by holding the *ctrl* key).
Select *Non-default working time.*   We will leave the working times unchanged.
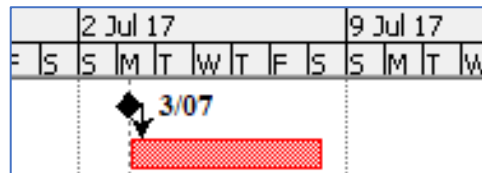Your screen should look like the following:

Repeat the process for August 2017, and then click on **OK**.

4.   Now enter the following activities using the *Gantt Chart* view.

	ⓘ	Name	Duration	Start
1		START	0 days	3/07/17 8:00 AM
2		Activity A	5 days	3/07/17 8:00 AM
3		Activity B	10 days	3/07/17 8:00 AM
4		Activity C	7 days	3/07/17 8:00 AM
5		Activity D	4 days	3/07/17 8:00 AM
6		Activity E	3 days	3/07/17 8:00 AM
7		Activity F	4 days	3/07/17 8:00 AM
8		Activity G	0 days	3/07/17 8:00 AM

5.   Previously we defined the activity relationships by entering them in the *predecessors* column. This time we will use *drag-and-drop* to do the same thing.

On the Gantt Chart graphic, click on **Start** and drag it to **Activity A.** An arrow will be drawn connecting the two activities**.**

Repeat the process as follows:

Link **START** to **Activity B**
Link **Activity A** to **Activity C**
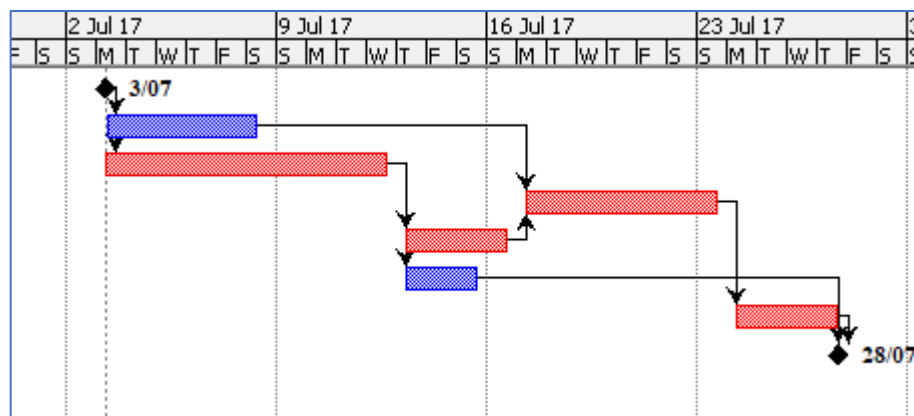Link **Activity B** to **Activity D** and **Activity E**
Link **Activity C** to **Activity F**
Link **Activity D** to **Activity C**
Link **Activity E** to **Activity G**
Link **Activity F** to **Activity G**

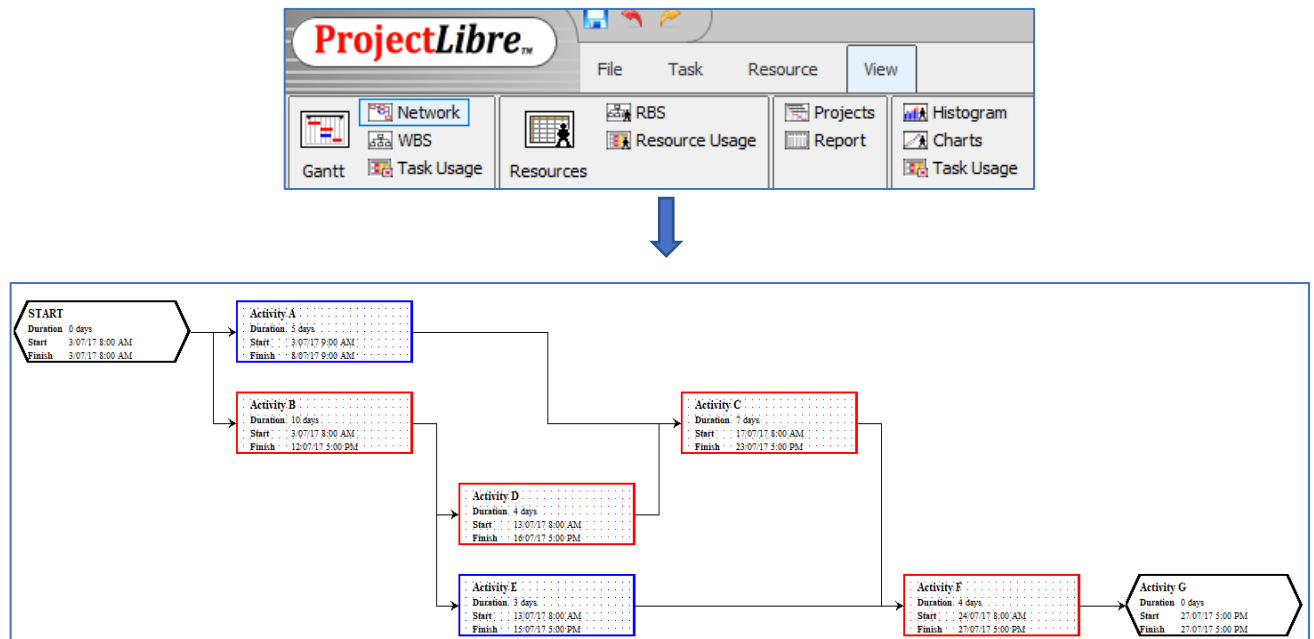The Gantt Chart should now look like**:**

The red activities indicate the *Critical Path*, the black diamonds are *Milestones*.

6.   You will note that the default relationship of the links is FS (Finish-to-Start), i.e. a given activity cannot start until its predecessor(s) has finished.   Other possible relationships are SF, FF, SS.
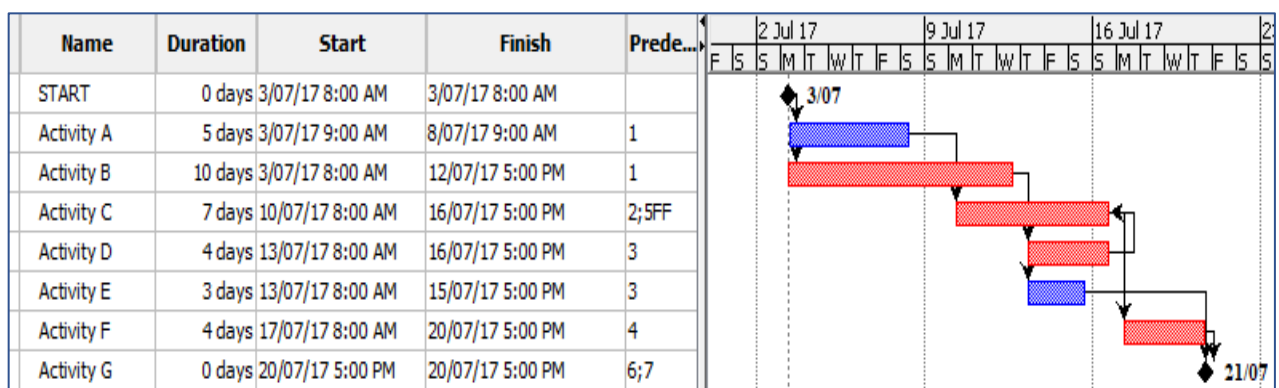For the network that we have defined the relationship between Activity C and D is FF; Activity C cannot finish until Activity D has finished. To change this, we will use the *Network View.*
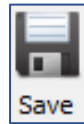
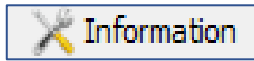7. Click on the *View* tab and then the *Network* button.

8. Click on the line joining Activity C and Activity D.

9. In the *Task Dependency* window, change the *Type* to FF and click on **OK**.
The Network Diagram will not change, however if you go back to the Gantt view you will see the new relationship.
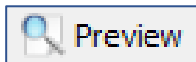You can also see this is the *Predecessors* column.

Name	Duration	Start	Finish	Prede...
START	0 days	3/07/17 8:00 AM	3/07/17 8:00 AM	
Activity A	5 days	3/07/17 9:00 AM	8/07/17 9:00 AM	1
Activity B	10 days	3/07/17 8:00 AM	12/07/17 5:00 PM	1
Activity C	7 days	10/07/17 8:00 AM	16/07/17 5:00 PM	2;5FF
Activity D	4 days	13/07/17 8:00 AM	16/07/17 5:00 PM	3
Activity E	3 days	13/07/17 8:00 AM	15/07/17 5:00 PM	3
Activity F	4 days	17/07/17 8:00 AM	20/07/17 5:00 PM	4
Activity G	0 days	20/07/17 5:00 PM	20/07/17 5:00 PM	6;7

10.   On the *File* tab, save the project.   .
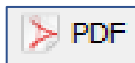
11.   Click on the button.   You can see statistics such as the project duration
      (18 days).

12.   Click the button to view a print preview of your project.

      Click on the button to print the report.

      The button will generate a PDF file.

13.   If you *right-click* on any of the activity line
      numbers, you can perform functions
      such as insert, delete, copy, indent etc.