

Dr. Adnan Fadhil

Assist. Lect. Mustafa Ayad

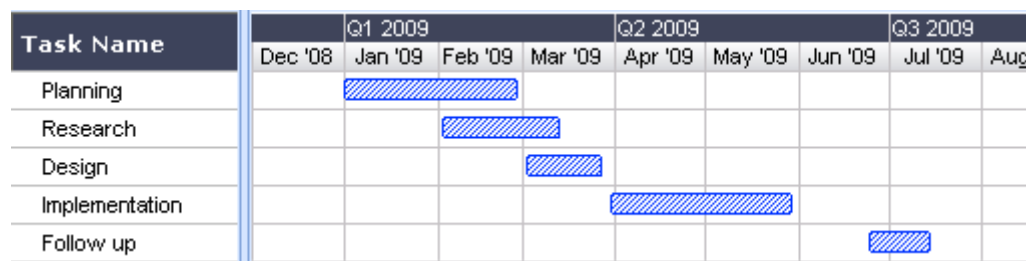


Bar-chart (Gantt chart) Planning Technique

❖ What is a Gantt chart?

A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the position and length of the bar reflects the start date, duration and end date of the activity.

This figure shows an example of a Bar-chart (Gantt chart):



❖ Benefits of Using Bar-chart (Gantt chart) Technique For Project Planning

- **Clarity:** Gantt chart has the ability to show and clarify multiple tasks and timelines.
- **Communication:** It is a visual method to help project team members understand task progress.
- **Motivation:** Gantt charts offer project teams the ability to focus work at the front of, or at the tail end of a task timeline.
- **Coordination:** project managers use these charts to break down projects into manageable sets of tasks.
- **Creativity:** The use of Gantt charts often encourages new partnerships that might not have evolved under traditional task assignment systems.
- **Time Management:** Time scheduling is considered as one of the major benefits of Gantt charts
- **Flexibility:** It offers a view of project which can help team members adjust changes.
- **Manageability:** By using Gantt charts, project managers can make more focused, effective decisions about resources and timetables.
- **Efficiency:** Visualizing resource usage during projects allows managers to make better use of people, places, and things.
- **Accountability:** Using Gantt charts during critical projects allows both project managers and participants to track team progress.

Dr. Adnan Fadhil
 Assist. Lect. Mustafa Ayad

❖ **Disadvantages of Using Bar-chart (Gantt chart) Technique For Project Planning**

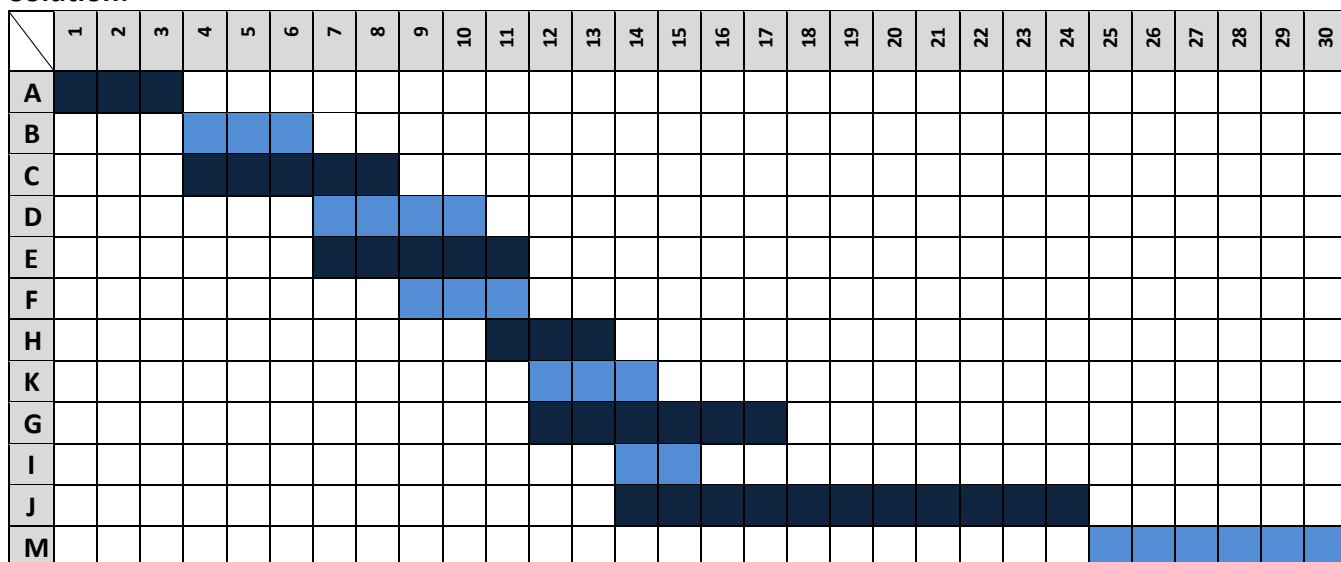
- They can become very complex
- The length of the bar does not indicate the amount of work
- They all the time need to be updated
- Difficult to see on one sheet of paper
- The Critical path (C.P) cannot be clearly indicated

❖ **Examples of Project Gantt charts**

Ex.1/ using the details shown below, build a Bar-chart to find the project's total duration.

Activity	A	B	C	D	E	F	H	K	G	I	J	M
Duration (days)	3	3	5	4	5	3	3	3	6	2	11	6
Followed Activity	B,C	D,E	F	H	K	K,G	I,J	----	----	----	M	----

Solution:



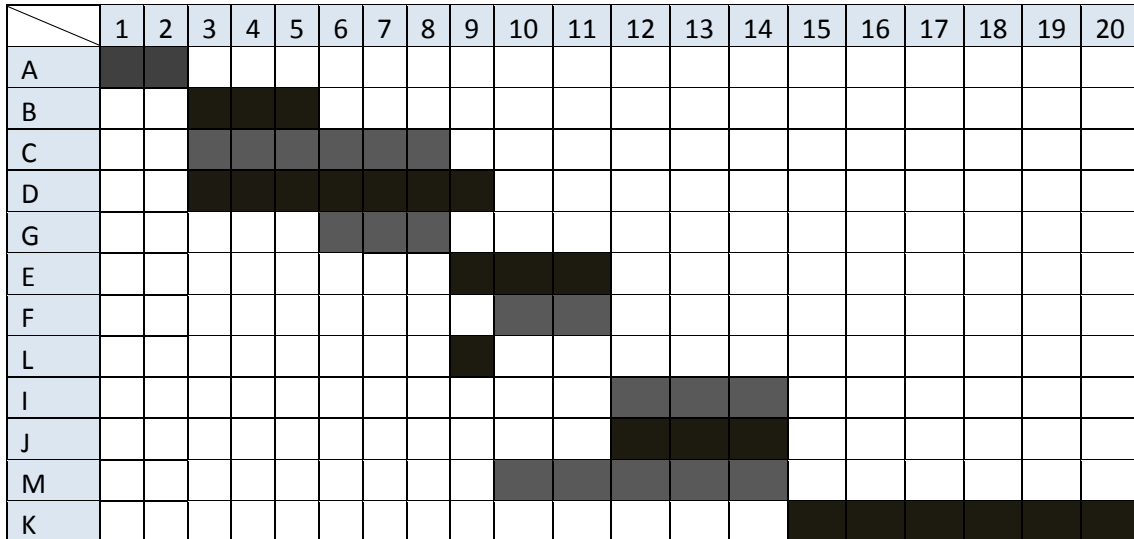
Project Total Duration is 30 days (C.P= A,B,D,H,J,M)

Ex.2/ Find the project's total duration and date of completion (assume the project start date is 1st of December 2014). Use the following details to build the Gantt chart:

Activity	A	B	C	D	G	E	F	L	I	J	M	K
Duration (weeks)	2	3	6	7	3	3	2	1	3	3	5	6
Following Activity	B,C,D	G	E	F	L	I	J	M	K	K	K	----

Dr. Adnan Fadhil
 Assist. Lect. Mustafa Ayad

Solution:

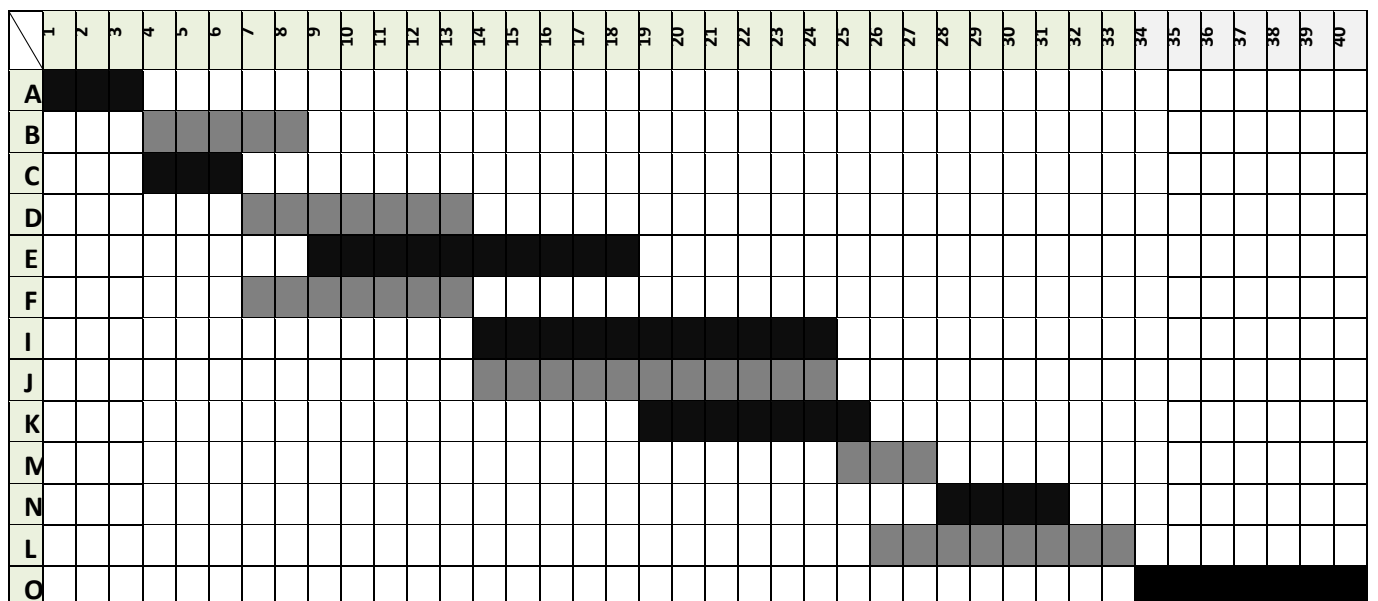


Project Total Duration is 20 weeks. The estimated completion date is 1st of May 2015
 (C.P= A,D,M,K)

Ex.3/ Find the project's total duration and date of completion (assume the project start date is 15th of March 2015). Use the following details to build the Gantt chart:

Activity	A	B	C	D	E	F	I	J	K	M	N	L	O
Duration (months)	3	5	3	7	10	7	11	11	7	3	4	8	7
Following Activity	B,C	E	D,F	I,J	K	I,J	M	M	L	N	----	O	----

Solution:



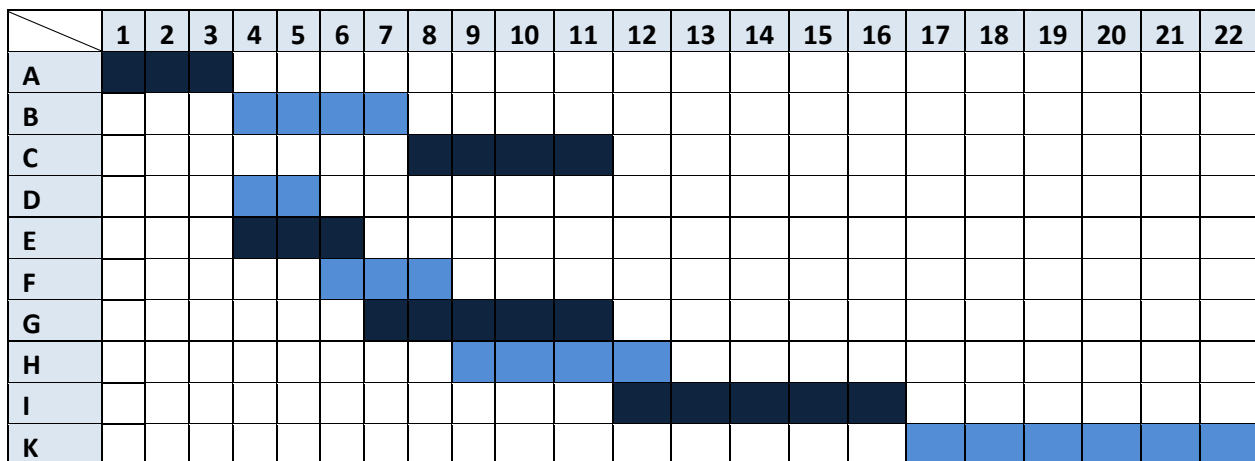
Project Total Duration is 40 months. The estimated completion date is 15th of July 2018
 (C.P= A,B,E,K,L,O)

Dr. Adnan Fadhil
 Assist. Lect. Mustafa Ayad

Ex.4/ A project, its activities are shown below, was started on (20/1/2014). Use the Gantt chart technique to find its estimated delivery date.

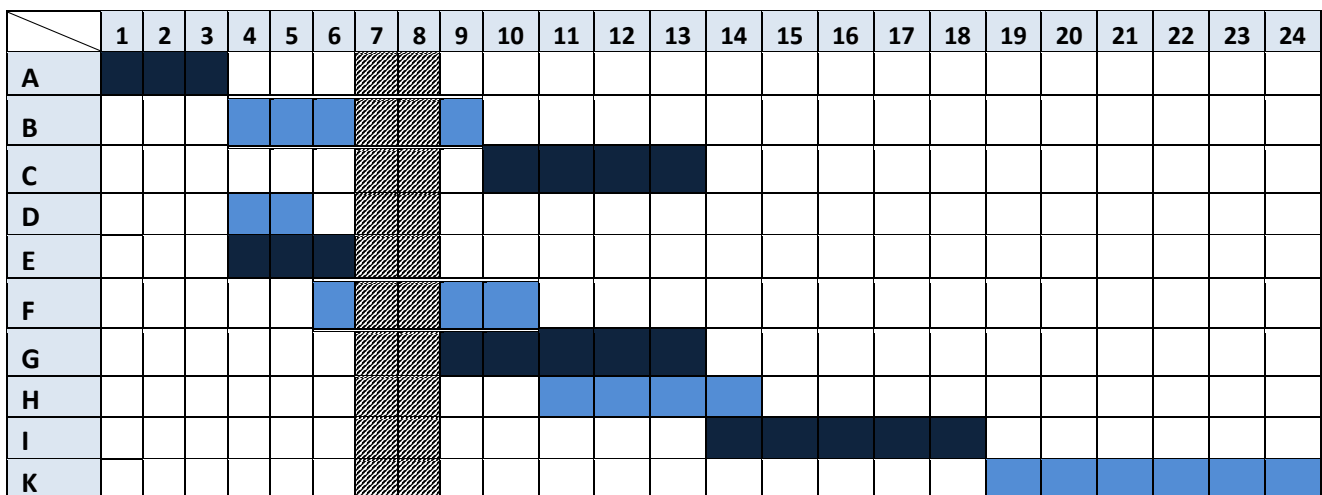
Activity	A	B	C	D	E	F	G	H	I	K
Duration (weeks)	3	4	4	2	3	3	4	4	5	6
Following Activity	B,D,E	C	I	F	G	H	I	----	K	----

Solution:



Project Total Duration is 22 weeks. The estimated delivery date is 7/7/ 2014
 (C.P= A,B,C,I,K)

❖ If the project shown above had a delay of (2) weeks after (6 working weeks), what would be its new delivery date?



The project's new delivery date would be 21/7/ 2014