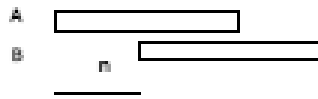


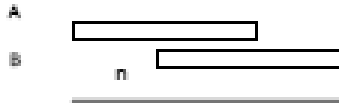


## العلاقات الجدلية بين الفعاليات :



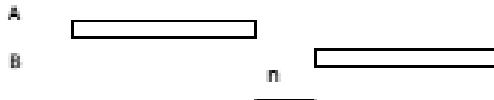
١. علاقة بداية - بداية ( S.S) Start -Start

أي ان الفعالية B لا تبدأ إلا بعد مرور ( n) على بداية A



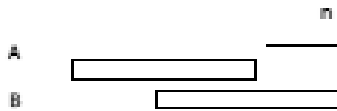
٢. علاقة بداية - نهاية (S.F) Start-Finish

أي ان الفعالية B لا تنتهي الأبعد مرور ( n) على بداية A



٣. علاقة نهاية- بداية ( F.S) Finish -Start

أي ان الفعالية B لا تبدأ الأبعد مرور ( n) على نهاية A



٤. علاقة نهاية- نهاية (F.F) Finish - Finish

أي ان الفعالية B لا تنتهي الأبعد مرور ( n) على نهاية A

مثال اوجد زمن انجاز المشروع المبينة فقرانه والعلاقات بينها بطريقة المخطط الشريطي

Activity	Duration	Followed by	Relation ship
A	2	B	F.S=2
		E	S.S=3
B	6	C	F.S=2
		D	F.S=2
C	6	G	F.S=2
D	1	F	S.F=3
E	3	F	F.F=2
F	3	G	F.S=0
G	2		

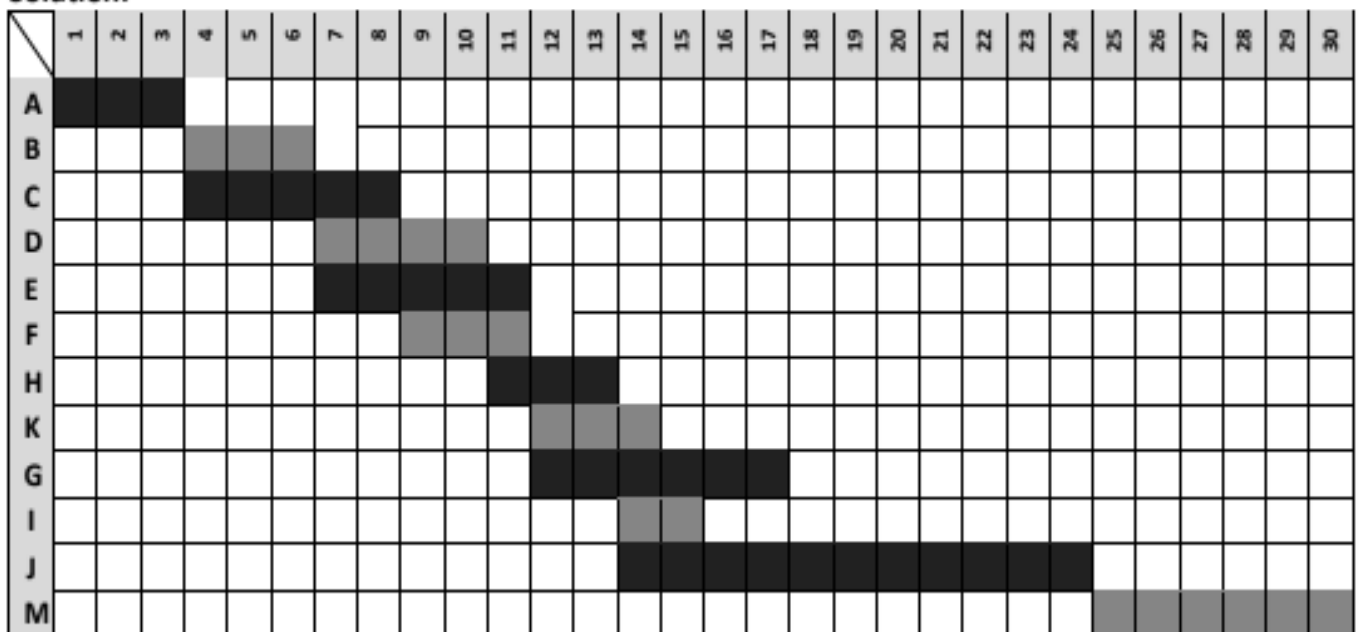


❖ *Examples of Project Gantt charts*

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

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

Solution:

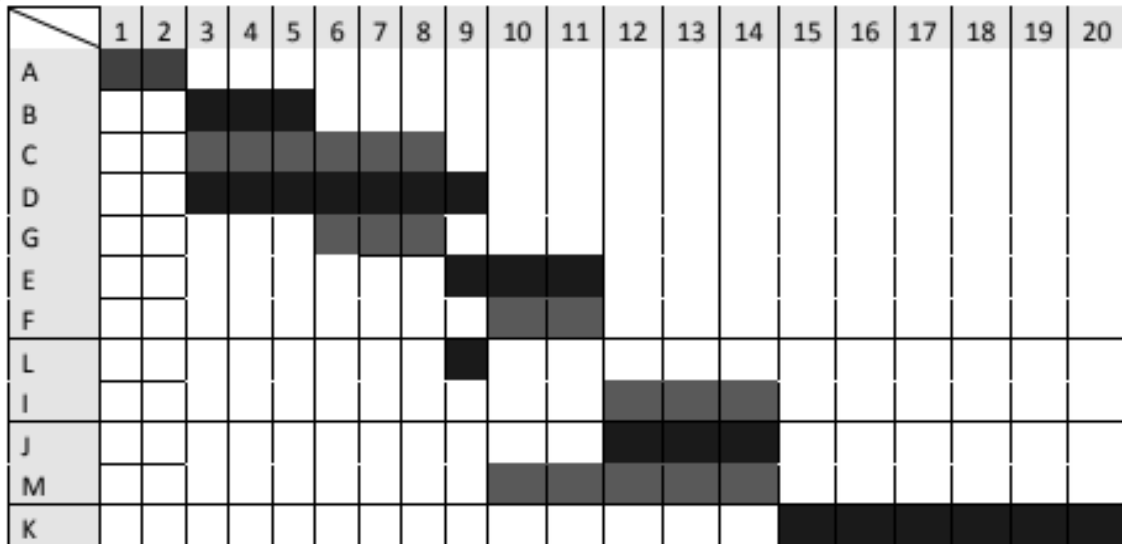


Project Total Duration is 30 days ( C.P= A,B,D,H,J,M )

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

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

Solution:

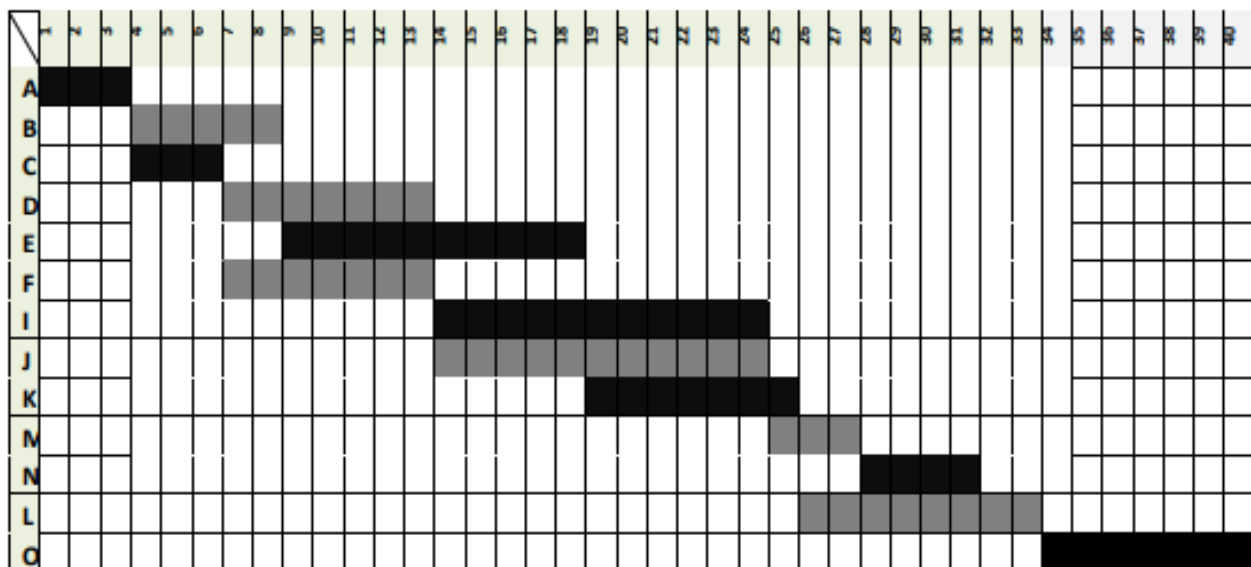


Project Total Duration is 20 weeks. The estimated completion date is 1<sup>st</sup> of May 2015  
(C.P= A,D,M,K)

Ex.3/ Find the project's total duration and date of completion (assume the project start date is 15<sup>th</sup> 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:

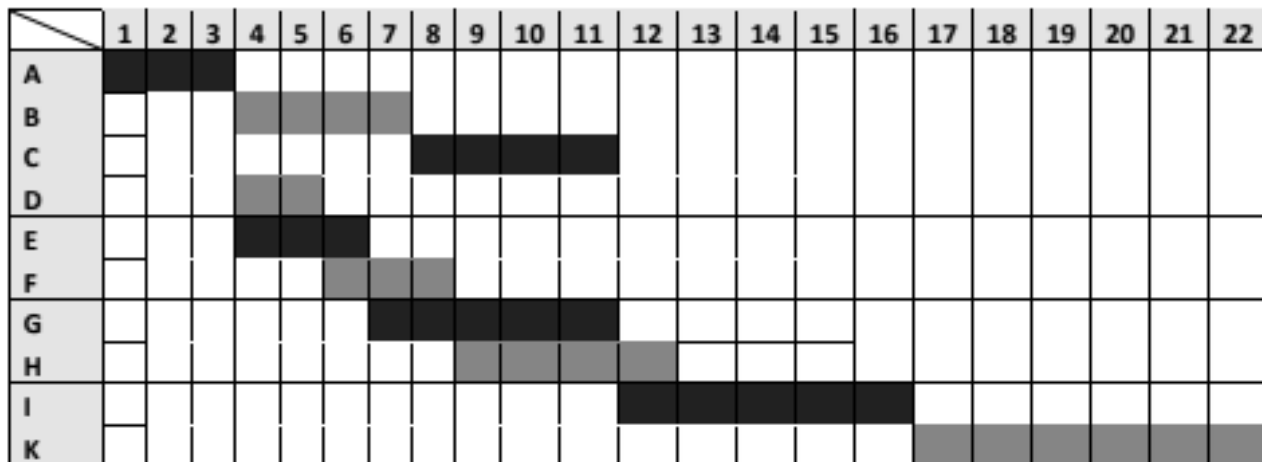


Project Total Duration is 40 months. The estimated completion date is 15<sup>th</sup> of July 2018  
(C.P= A,B,E,K,L,O)

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.

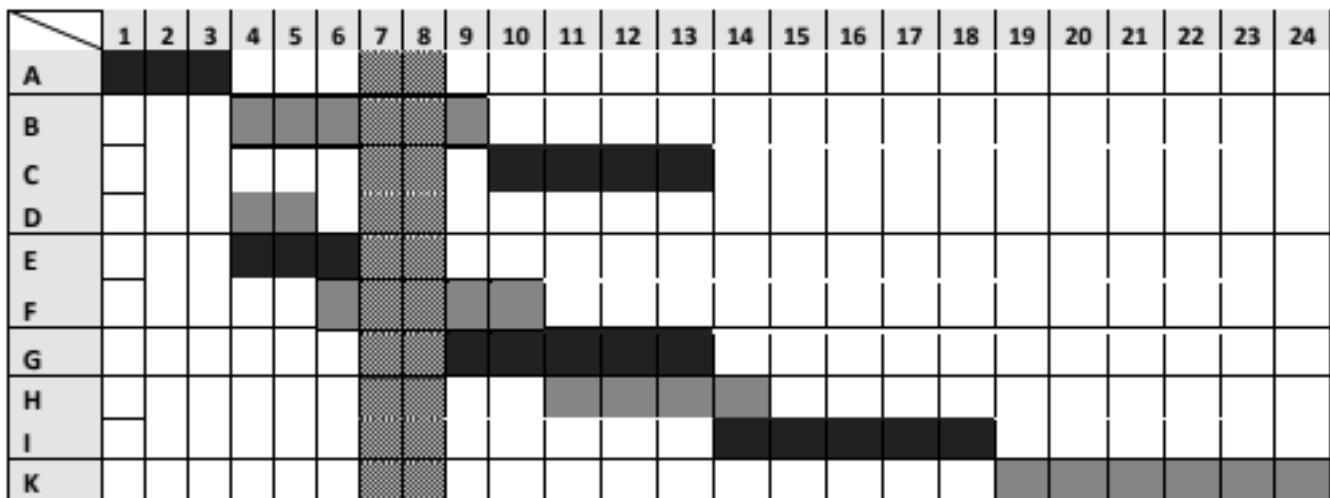
Activity	A	B	C	D	E	F	G	H	I	K
Duration (weeks)	3	4	4	2	3	3	4	4	5	6
Following Activity	B,D,E	C	I	F	G	H	I	----	K	----

**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**