

A company want to start a project as Launching a new product. The following table is the related task, resources and predecessors. They want to start the project in 20/07/2024 and want to know when it will be finish. In addition, the project site uses the standard calendar but they work additionally on Saturdays from 8:30 to 14:30. There will be vacations from 4th to 11th of August and 21th of September.

ID	Task Name	Duration	Pred	Relation	Resource
1	New Product Launch				
2	Phase 1 - Planning				
3	Identify the launch team	1			C.E.O, Manager
4	Determine sales objectives	2	3	fs	Sales Manager
5	Define launch goals	5	4	fs	C.E.O, Sales Manager
6	Determine partners	3	5	fs	C.E.O
7	Establish Launch Budget	2	6	ss	C.E.O, Manager
8	Planning COMPLETE	1	7,6	fs	C.E.O, Sales Manager
9	Phase 2 - Initiation				
10	Kickoff product launch	2	8	fs	C.E.O, Sales Manager, Manager, Engineer
11	Marketing	5	10	fs	Sales Manager, Salesman
12	Engineering	8	10	fs	Engineer, Manager
13	Manufacturing	12	12	fs	Manager, worker01, Worker02
14	sales	7	13	ss+2days	Sales Manager, Salesman
15	Procdt Support	5	13,14	fs	Manager, Engineer
16	Phase 3 - Execution of prototype				
17	Marketing	25	11	fs	Sales Manager, Salesman
18	Engineering	30	15,17	fs,ss	Engineer, Manager
19	Manufacturing	55	13	fs	Manager, worker01, Worker02
20	Sales	25	17	ss+5 days	Sales Manager, Salesman
21	Product Support	10	20	ss	Manager, worker01, Sales Manager, Engineer
22	Field Service	3	21	fs	Engineer, salesman, worker02
23	Prepare for Manufacturing Release	2	22	fs	Engineer, salesman, worker02, Manager
24	Execution Phase COMPLETE	0	23	fs	

The sales manager just works on the basis of Standard calendar and salesman just be available from Wednesday to Saturday.

The cost for each Resource is as follow:

Name	Max %	Std. Rate \$/h	Ovr. Rate \$/h
C.E.O	120	120	180
Manager	100	100	150
Sales Manager	100	80	96
Engineer	100	85	120
Salesman	130	90	95
Worker 01	100	50	75
Worker 02	150	60	85