

## **BA6052 - PROJECT MANAGEMENT: COURSEWORK**

Due: Teaching Week 14, Monday 27<sup>th</sup> Jan, 2020 by 3pm

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### **Please Note – Please submit ‘On-Line’ through Turnitin**

We advise you to use Microsoft Project for this work - but you may use other software if you prefer (provided it has similar features and you know how to use them).

Instead of using this case study for your coursework, you may use details from your own project - but only if you clear this with Martin Topple by *Teaching Week 9* at the latest. Of course, your project must be of equivalent size and complexity to the case study enclosed.

*This is an individual assessment. All work submitted must be your own work. Any plagiarism or copying discovered will be referred through appropriate channels and constitutes a serious examination offence.*

Please keep any media safe and make regular backups. Keeping discs and/or other electronic media (and their copies) safe is your responsibility. Disc, media or printer failure is not a valid reason for either late or non submission.

We reserve the right to ask to see your working files.

### **BACKGROUND INFORMATION:**

This case study is based on a job run by a firm of Computer Consultants to install some new database query software across a company with several different sites (nodes). The tasks are already grouped and indented - but resource allocations have been stripped out.

You can obtain the project file from WebLearn or from your BA6052 WebLearn site. The case study data file, called ‘**BA6052.mpp**’, has been saved *without* a baseline.

The project consists of about 50 tasks (some of which are summary tasks or milestones).

Notice that the critical tasks are unshaded whereas the non critical tasks are shaded in. This is so you can tell them apart on a monochrome printer or a photocopier.

## Part A:

You are given the following information about the supply of resources for your project (all work based):

Resource Name:	Max Units:	Standard Rate	O/T rate:
Applications Manager	200%	£80.00/h	£95.00/h
Integration Manager	100%	£75.00/h	£90.00/h
Manager	100%	£80.00/h	£95.00/h
Network Engineer	600%	£50.00/h	£80.00/h
Programmer	500%	£50.00/h	£65.00/h
Software Installer	300%	£60.00/h	£80.00/h
Support Manager	100%	£60.00/h	£80.00/h
Systems Analyst	300%	£65.00/h	£85.00/h
System Tester	300%	£55.00/h	£70.00/h
Technical Author	100%	£70.00/h	£90.00/h

## Required:

### Part A i)

**First**, allocate these resources to the tasks as stated below (where ‘NE’ means ‘Network Engineer’, ‘SA’ means ‘Systems Analyst’ ... and so on):

ID	Brief Name:	Resources to be allocated:
3	Install Ethernet and fast ethernet	NE at 200% and SA at 200%
4	Install multi mode fibre connection	NE at 200%
5	Request BT for connections	M at 100%
6	Schedule downtime for installation	NE at 200% and SA at 200%
9	Obtain Console hardware	SM at 100%
10	Determine subsystems to be installed	M at 100% and IM at 100%

**Next, using your common sense (and differently from every other student)**, allocate *at least* one of the resources to each of the sub tasks as you consider appropriate. *Do not* add resources to top level summary tasks or milestones (though you may wish to add various fixed costs to these later).

For example, sub tasks that involve installation of software will require ‘Software Installers’, sub tasks which involve writing or reviewing manuals will involve the ‘Technical Author’, etc. Some sub tasks may need more than one resource. Do not feel that you have to use all of the resources listed.

(**Note:** Your mark will ignore the relevance, or otherwise, of your resource allocations.)

It is likely that some resource clashes will occur.

*For the first three such clashes that occur:*

Resolve them in any way you consider sensible or let ‘MS Project’ do it for you. Document

carefully and explain any changes made either by you or by 'MS Project' at the task level.

*For any other clashes that occur:*

Simply resolve them. There is no need to document any of the additional clashes.

**Please note - as guidelines:**

- \* With an acceptable allocation of resources (using the above tasks as guidelines for loadings), you should find that total costs are around **£150,000** (possibly/probably a bit higher). You should not need to extend the duration of the project. If you do - you are probably loading in too many resources on each task. *Try again.*
- \* You are advised to choose the option for 'Level within available slack' from the 'Resource', 'Levelling options' window and to show the baseline as a reference point via 'Format'. You should also reset the baseline *between* clashes so as to collect the clearest possible evidence of each clash.
- \* Make sure that when you add resources to tasks you do so in a way that *does not* change task durations. Either allocate all the resources to a task at once or add the resources and then reset the duration in the 'Gantt chart' to the original value.
- \* If you choose to solve clashes manually then remember that it is better to add new links between tasks rather than 'dragging' them forward. Dragging a task sets an 'SNET' constraint that may cause you problems later on.
- \* You may add other resources if you wish provided that you justify their inclusion.

**Part A ii)**

In part A i) above, you were given an initial supply of resources. Now that you have made your allocation of staff to tasks you should reconsider this initial allocation.

**Required:**

1. Find the minimum level of resources required for your project in order that it is still possible for all tasks to start at their earliest event times. Explain how you achieve this and give suitable evidence to show that it has been achieved.
2. Find the minimum number of 'Network Engineers' that can be allocated without delaying the current project finish date. Again, explain and give evidence.
3. Explain also why this knowledge may be important to the effective management of your project

Leave the number of resources at the level found in 'Part A ii) 1' for the rest of your work.

**(30 marks)**

## Part B:

You are now given the following information about various **fixed costs**:

Overheads are allocated to the project at £140 per day (covering management and administrative costs, secretarial support, consumables, photocopying, plan prints and office accommodation where allocated to this project, etc.). Payment is to be made pro rata.

For task 3 (Install ethernet and fast ...) the cost of components is £9000 paid up front.

For the duration of 'Phase 2' you must hire a test site at a cost of £300 per week paid at the end of the phase.

### Required:

Add the fixed costs as specified above. *Describe carefully* how each fixed costs is allocated within the programme and how much each adds to total cost. Provide evidence of these changes.

Of course, in the actual project, there would be far more fixed costs to take account of. But for the purposes of this assessment we will ignore them.

*Note:* When you add in fixed costs make sure you do so in a way that does not change the duration of your tasks.

**(15 marks)**

## Part C:

At the moment, by default, the project is using the 'Standard' Microsoft Project calendar which ignores both Bank and Public Holidays. Create a new copy of the standard calendar (perhaps called by your name) and allocate it as the default calendar for your project. It should include the following dates, where relevant, as non working days:

**Year 2021:** 01 Jan    02 Apr    05 Apr    03 May    31 May  
                  30 Aug    27 Dec    28 Dec

**Note:** if you are using your own project for the assessment and dates fall outside the range given above, then simply visit the 'GOV.UK' (or any other) web page for dates:

<https://www.gov.uk/bank-holidays>

With the 'Standard' calendar the project is due to start on Monday, 08 March 2021 and finish on Monday, 25 June, 2021 (a total of 80 working days).

**Required:**

Where will your new calendar be used in Project? Carefully explain any change in the project finish date.

Show some clear evidence that your dates have been changed to non working days.

**(20 marks)**

**Part D:**

What is meant by the term ‘tracking’? Why is it necessary to ‘track’ a project?

Your project now starts and you receive a report telling you that tasks 3 to 7 went off exactly according to plan.

**Required:**

Update MS Project to show that tasks 3 to 7 did indeed go according to plan.

Now, track through this project for tasks 9 to 13 inclusive making any assumptions about actual durations and/or costs you like. Have at least three tasks where either the duration or the cost (or both) were different from your baseline figure(s).

Explain carefully the variances you introduce for each of the tasks and carefully document the impact on costs and durations in your project for each task.

Provide some print out which demonstrates that tracking has occurred at task level and shows any cost and/or time variances so created.

**(35 marks)**

**TOTAL: 100 Marks**

## **BA6052 - PROJECT MANAGEMENT COURSEWORK**

### **Assessment Guidelines:**

You may find detailed assessment criteria in your BA6052 Module Booklet on WebLearn.

Your work should be clear, precise, coherent and well presented. You should show a clear understanding of how your analysis and conclusions are dependent upon any underlying assumptions required or employed by you. You should show a clear integration of knowledge from other modules where appropriate.

Make sure that you fully explain and justify any steps taken at each stage particularly with respect to the clashes, the use and effect of your calendar, the allocation of fixed costs to the project and your tracking. For the tracking, carefully document the tasks where actual and planned costs and/or durations diverge. Detail fully and explain any cost and/or time variances so produced.

### **Please avoid collusion:**

It is expected that each student will allocate resources to tasks differently from every other student so that your clashes, total costs and scenarios used in tracking are all unique to you.

You may help each other working out scenarios but the eventual write up and scenarios must be your own and be different from those of every other student.

### **Screenshots and computer printout:**

Any screenshots (or computer printout) should be given a clear interpretation and analysis and placed in the body of your text. Since the marking is now done 'on-line' please do not put these images in the form of an appendix. With screenshots in an 'on line' submission it is far easier for your examiners if they are in the body of the text (where needed and referred to).

Also, please avoid using 'landscape' mode as your text becomes *almost impossible* to read in 'Turnitin' submissions on my lap top computer.

We thank you for your co-operation in these two matters.

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