



**T Level Technical Qualification in Digital, Digital Production, Design
and Development (Level 3)**

8 November 2021

Controlled hours 3 hours

**Paper
reference**

19538

Core

Employer Set Project

TASK 1: Planning a project

You do not need any other materials.

Information

- This booklet contains material for the completion of the set task under supervised conditions.
- This booklet is specific to each series and this material must only be issued to students who have been entered to undertake the task in the relevant series.
- This booklet must be kept securely until the start of the timetabled assessment.

Turn over ►

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Instructions to students

You must complete ALL parts of the activity within the assessment.

The task must be undertaken at the time and on the date specified by Pearson

You will be given three hours for producing the outcomes for this task.

Your centre will advise you of when any supervised breaks have been scheduled.

The task must be completed under supervised conditions.

You are not permitted access to the internet during this task.

You are permitted to use offline versions of relevant software to produce evidence for this task.

Your work and any material provided must be kept securely at all times.

Set task brief

You work for a software development company that has been offered the contract to develop the new digital solution for NTEM Sales Services.

Your manager has asked you to analyse the potential costs, benefits and risks associated with the project and then produce a plan for the development of the new digital solution.

Your manager intends to use your plan during the next monthly meeting with the client.

Activity

Using the set task information provided your manager has asked you to produce:

- a Gantt chart to demonstrate how you would organise the development of the new digital solution
- a plan for the resources selected and associated costs
- a rationale that explains your planning approach and justifies the decisions you made.

(19 Marks)

Outcomes for submission

Save your Gantt chart as a PDF file **and** as either:

- an Excel compatible spreadsheet file
- or MS Project compatible file (as appropriate).

Save your resource and cost plan as a PDF file **and** as:

- an Excel compatible spreadsheet file
- a MS Project compatible file (as appropriate).

Save your rationale as a PDF file.

All files should be saved in your folder for submission.

Use these naming conventions:

Task2GanttChart_[Registration number #]_[surname]_[first letter of first name]

Task2ResourceCostPlan_[Registration number #]_[surname]_[first letter of first name]

Task2Rationale_[Registration number #]_[surname]_[first letter of first name]

Set task information

NTEM Sales Services is a company that sells prebuilt computer units to organisations. The recent boom in home working has created a boost in sales.

After reviewing its current systems, NTEM Sales Services has decided that it needs to develop a new digital solution.

The aims of the solution are to allow:

- customers and company representatives to communicate more effectively
- customers to:
 - be able to view and purchase pre-built computer systems in store and online
 - access technical support
- management to:
 - access tools for carrying out business data analysis
 - help improve service around client needs (data analysis)
 - monitor and analyse staff performance.

The requirements of the system are:

- a user interface (GUI) with appropriate accessibility features
- to provide customers with access to sales and technical support services
- the ability for staff to interact with a dashboard of business information.

Planning information

NTEM estimates that the new solution will allow an increase in revenue of 5% in its first year, and an increase of 9% in its second and third.

NTEM and your manager have provided you with information to help you produce your plan.

Company Financial Data	
Description	Amount (£)
Current annual revenue	1, 122, 000
Current outgoing	977, 000
Forecast for development	Amount (£)
Purchasing of hardware	10, 000
Training for staff	4, 000
Software development company base fee	45, 000
Software licensing (annual)	450
Upgrades to company infrastructure	4, 000
Server upgrade	Option 1 Cloud: 200 per calendar month Option 2 Physical: 3, 000 (one off)
Your pay (project lead)	135 per day
Ongoing costs	Amount (£)
Maintaining servers and equipment (annual)	10, 000

Due to current staff commitments, your manager has given you permission to make use of an outsourced team in order to complete the project.

Your project development team will consist of:

- one Senior Software Engineer
 - Jennifer Watkins
- two Junior Software Engineers
 - Tamara Aghazarian
 - Jacob Jones
- one Hardware and Networking Technician
 - Leighton Budding
- one Database Engineer
 - Kelly Gipson.

Profiles for the staff

Name	Jennifer Watkins
Title	Senior Software Engineer
Core skills	<ul style="list-style-type: none">• Able to code in Python• Able to identify security flaws in systems and how to overcome them• Networking module development• Developing sign off materials in line with a specific client's requirements
Previous experience	<ul style="list-style-type: none">• Worked as a Junior Software Engineer for a number of organisations on large digital products• Worked as a network security analyst in a previous role• Managed teams on development of small- scale digital solutions
Cost	£107 per hour

Name	Tamara Aghazarian
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none"> • Able to identify security flaws in systems and how to overcome them • Skilled at design and implementation of user interfaces • Has certification in multiple methods of software testing • The ability to explain complicated processes in non-technical language
Previous experience	<ul style="list-style-type: none"> • Worked as a games tester after graduation before moving to games design • Worked as in-house technical support
Cost	£55 per hour

Name	Jacob Jones
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none"> • Experience of developing test plans and hardware testing • Some experience of deployment of software
Previous experience	<ul style="list-style-type: none"> • Recently completed software development placement as part of a T-level • Previously worked in a company that provided bespoke hardware solutions
Cost	£35 per hour

Name	Leighton Budding
Title	Hardware and Networking Technician
Core skills	<ul style="list-style-type: none"> • Experience of Python and PHP • Installation of hardware on large- scale projects • Experience of updating and upgrading a range of infrastructure • Server experience for setup installation
Previous experience	<ul style="list-style-type: none"> • Worked as networking technician for 14 years
Cost	£70 per hour

Name	Kelly Gipson
Title	Database Engineer
Core skills	<ul style="list-style-type: none"> • Has certification in multiple methods of software testing • Developing sign off materials in line with a specific client's requirements • Extensive experience of developing back end databases using PHP and MySQL
Previous experience	<ul style="list-style-type: none"> • Worked on large web-based projects previously in the financial services sector
Cost	£75 per hour

Task	Estimated number of work hours
Upgrade infrastructure	22
Deploy cloud server	6
Install and configure physical server	28
Develop module 1: Back end database	110
Develop module 2: User interface	33
Develop module 3: Business data analysis	90
Develop module 4: Sales	100
Develop module 5: Technical support	84
Deploy modules	5 (per module)
Installation of hardware	30
Testing of hardware	18
Unit testing	16 (per module)
Integration testing	20 (per module)
Fixing and regression for major fault	13 (per fault)
Fixing and regression for minor fault	5 (per fault)
Create a test plan	5
Staff training	20
User/acceptance testing	15
User training	20

It is assumed that:

- 6 minor faults will be found with each module
- a maximum of 4 major faults will be found throughout the whole project
- staff will work 7 hours a day 5 days a week.

NTEM has requested that the job is completed in 12 weeks.