



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

23 May 2022

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 Newhaven Property Investments.

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)

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:

Task1GanttChart_[Registration number #]_[surname]_[first letter of first name]

Task1ResourceCostPlan_[Registration number #]_[surname]_[first letter of first name]

Task1Rationale_[Registration number #]_[surname]_[first letter of first name]

Set Task Information

You work for a software development company that has been offered the contract to develop the new digital solution for Newhaven Property Investments. Your manager has asked you to work as part of a group of developers to investigate the use of digital technology in the property sector in preparation for the start of the project and report back to your colleagues.

Newhaven Property Investments provides two main services:

- estate agency services for buying and selling properties
- advice on investment in real estate.

The company has offices in different regions around the country. Each region of the organisation currently operates independently, and with different approaches to forecasting and recording.

After reviewing its current systems, Newhaven Property Investments has decided that it needs to develop a new centralised digital solution.

The aims of the solution are to allow:

- customers and company representatives to communicate more effectively
- customers to:
 - be able to receive tailored advice on property sales and investments, based on region and budget
- management to:
 - access tools for carrying out business data analysis
 - help improve service around client needs (data analysis).

The requirements of the system are:

- a user interface (GUI) with appropriate accessibility features
- to provide customers with access to up-to-date information on sales and investments
- to allow staff to access information on sales and client investments
- to allow staff to interact with a dashboard of business information.

Planning information

Newhaven Property Investments estimates that the new solution will allow an increase in revenue of 3% in its first year, 6% in its second year and an increase of 9% in its third year.

Newhaven Property Investments and your manager have provided you with information to help you produce your plan.

Company Financial Data	
Description	Amount (£)
Current annual revenue	912 000
Current outgoing costs	855 000
Forecast for development	Amount (£)
Purchasing of hardware	12 000
Training for staff	3 500
Software development company base fee	52 000
Software licensing (annual)	Option 1: Single fee 1 500 with three years' technical support Option 2: Annual fee 250 without technical support
Upgrades to company infrastructure	5 000
Server upgrade	2 700
Your pay (project lead)	140 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 these new, temporary staff:

- one Senior Software Engineer
 - Weronika Marzanna
- two Junior Software Engineers
 - Terrence Bull
 - Nasira Amina
- one Hardware and Networking Technician
 - Susanne Morris
- one Database Engineer
 - Ayaru Thapa.

Profiles for the new staff

Name	Weronika Marzanna
Title	Senior Software Engineer
Core skills	<ul style="list-style-type: none">• Extensive experience in deployment of software.• Able to develop modules around data analysis and sales to a consistently high standard.• Able to programme in multiple languages.
Previous experience	<ul style="list-style-type: none">• Has worked as a software developer across a number of large-scale projects.• Has some hardware testing experience from Level 3 studies, but this experience was several years ago.
Cost	£100 per hour

Name	Terrence Bull
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none"> • Limited experience in deployment of software. • Has certification in multiple methods of software testing. • Can code in Python and C. • Has some experience of HTML, CSS and Javascript, and limited experience of backend database development.
Previous experience	<ul style="list-style-type: none"> • Used to work in a staff development training role. • Has worked as a user interface designer for a web development company.
Cost	£45 per hour

Name	Nasira Amina
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none"> • Has graduate level experience of programming and module development.
Previous experience	<ul style="list-style-type: none"> • Recent graduate. • Completed work experience for a real estate company.
Cost	£35 per hour

Name	Susanne Morris
Title	Hardware and Networking Technician
Core skills	<ul style="list-style-type: none"> • Has some intermediate experience of user interface development. • Has experience of developing test plans and hardware testing. • Has experience of updating and upgrading a range of infrastructure. • Developing sign off materials in line with a specific client's requirements.
Previous experience	<ul style="list-style-type: none"> • Worked as part of a team overseeing large-scale infrastructure upgrades.
Cost	£70 per hour

Name	Ayaru Thapa
Title	Database Engineer
Core skills	<ul style="list-style-type: none"> • Has certification in multiple methods of software testing. • Highly specialised in the development of database modules. • The ability to explain complicated processes in non-technical language.
Previous experience	<ul style="list-style-type: none"> • Has worked as a database engineer for 14 years.
Cost	£75 per hour

The table shows the key tasks and the estimated number of work hours it will take to complete each task.

Task	Estimated hours
Upgrade infrastructure	30
Install and configure server	25
Develop module 1: Backend database	110
Develop module 2: Sales records	33
Develop module 3: User interface	50
Develop module 4: Data analysis	110
Develop module 5: Customer support	80
Deploy modules	6 (per module)
Installation of hardware	28
Testing of hardware	22
Unit testing	14 (per module)
Integration testing	15 (per module)
Fixing and regression testing for major fault	12 (per fault)
Fixing and regression testing for minor fault	5 (per fault)
Create a test plan	7
Staff training	30
User/acceptance testing	13
User training	15

It is assumed that:

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

Newhaven Property Investments has requested that the job is completed in 12 weeks.