

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

Wednesday 20 November 2024

Time 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.

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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 provider 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 a new digital solution for Versere Cars.

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** an MS Project compatible file (as appropriate).

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

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

Save your rationale as a PDF file.

All files should be saved in your folder for submission.

Use this naming convention:

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

Versere Cars is a local car dealership that buys and sells new and used cars. The company also offers car maintenance services. The company wants to develop a system to manage and support a range of business operations.

After reviewing its current systems, Versere Cars has decided that it needs to develop a new centralised digital solution.

The aims of the solution are to allow:

- the company to engage with stakeholders more effectively
- employees to manage:
 - car sales and inventory
 - customer records
- management to:
 - access tools for carrying out business data analysis
 - improve the quality of services offered through data analysis.

The requirements of the system are:

- to provide customers with up-to-date information about cars in stock and availability of car maintenance appointments
- to allow staff to access information that will support day-to-day activities at the car dealership
- to allow staff to interact with a dashboard of business information
- a user interface with appropriate accessibility features.

Planning information

Versere Cars estimates that the new solution will lead to:

- an increase in revenue of 12.5% after the system has been in place for one year
- an increase of 13% after two years
- an increase of 15% after three years.

The management team is aware that there will be an increase in outgoing costs as a result of the new system.

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

Company Financial Data	
Description	Amount (£)
Current annual revenue	1 574 985
Current outgoing	1 231 567
Forecast for development	Amount (£)
Purchasing of hardware	15 300
Training Versere Cars staff to use the new system	1 200
Software development company base fee	18 000
Server	Option 1: Physical server – 11 875 one-off payment Option 2: Cloud server – 462 per month
Upgrades to company infrastructure	9 800
Your pay (Project Lead)	185 per day
Ongoing costs	Amount (£)
Web hosting and online advertising	300 per month
IT Support Technician	33 000 per year

You have been allocated members of staff by your manager to assist with the project.

Your project development team will consist of these staff members:

- one Senior Software Engineer
 - Elisheva Denman
- one Junior Software Engineer
 - Andreja Förstner
- one Hardware and Networking Technician
 - Samantha Harrelson
- one Cloud Systems Architect
 - Eric Valencia.

Profiles for the project staff

Name	Elisheva Denman
Title	Senior Software Engineer
Core skills	<ul style="list-style-type: none">• Able to program in multiple languages.• Trained in a range of software testing methods.
Previous experience	<ul style="list-style-type: none">• 10 years' experience in software development.• Worked on implementing large-scale projects within the retail sector.• Five years' experience as a Team Leader.
Cost	£85 per hour

Name	Andreja Förstner
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none">• Able to program in multiple languages including SQL and Python.
Previous experience	<ul style="list-style-type: none">• Recently graduated from university and this will be their first job with the company.
Cost	£30 per hour

Name	Samantha Harrelson
Title	Hardware and Networking Technician
Core skills	<ul style="list-style-type: none"> • Proficient in developing test plans and hardware testing. • Level 4 qualifications in network infrastructure design and implementation. • Specialist in network security.
Previous experience	<ul style="list-style-type: none"> • Three years' experience working as a hardware and network technician in the education sector. • Two years' experience working for the development company.
Cost	£70 per hour

Name	Eric Valencia
Title	Cloud Systems Architect
Core skills	<ul style="list-style-type: none"> • Trained in full-stack development. • Proficient in front-end and back-end development, and cloud deployment.
Previous experience	<ul style="list-style-type: none"> • Five years' experience as a Cloud Systems Architect. • Has worked on large-scale projects in many different sectors.
Cost	£75 per hour

Task	Estimated Hours
Upgrade infrastructure	20
Deploy and configure cloud server	24
Deploy and configure physical server	15
Develop module 1: Stock and inventory management	50
Develop module 2: Sales management	25
Develop module 3: User interface	34
Develop module 4: Back-end database	50
Develop module 5: Car maintenance appointment management	45
Configure web hosting	26
Deploy modules	7 (per module)
Installation of hardware	12
Unit testing	8 (per module)
Integration testing	6 (per module)
Testing of hardware	48
Fixing and regression testing for major fault	7 (per fault)
Fixing and regression testing for minor fault	5 (per fault)
Creating a test plan	2 (per module)
Training Versere Cars staff to use the new system	21
User/acceptance testing	18

It is assumed that:

- four minor faults will be found with each module
- a maximum of three major faults will be found throughout the whole project
- the project will begin on 27th November 2024
- staff will work eight hours a day, five days a week.

Versere Cars has requested that the job is completed within eight weeks.