



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

Monday 6 November 2023

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.

Continue ►

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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 Snowy Animal Rescue.

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 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

Snowy Animal Rescue is a local charity that rescues and rehomes cats and dogs. The company wants to develop a system to manage and support a range of business operations.

After reviewing their current systems, Snowy Animal Rescue has decided that it needs to develop a new centralised digital solution.

The aims of the solution are to allow:

- the charity to engage with stakeholders more effectively
- employees to:
 - manage the rescue and adoption process
- management to:
 - access tools for carrying out business data analysis
 - help improve the quality of services offered through data analysis.

The requirements of the system are:

- a user interface with appropriate accessibility features
- to provide stakeholders with up-to-date information about the animals and the charity as a whole
- to allow staff to access information that will support day-to-day activities at the charity
- to allow staff to interact with a dashboard of business information.

Planning information

Snowy Animal Rescue estimates that the new solution will lead to:

- an increase in revenue (donations) of 15% after the system has been in place for one year
- an increase of 17.5% after two years
- an increase of 19% after three years.

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

Snowy Animal Rescue and your manager have provided you with information to help you produce your plan.

Company Financial Data	
Description	Amount (£)
Current annual revenue (donations and grants)	151 780
Additional one-off government grant for upgrading digital systems and buildings	60 000
Current outgoing	139 980
Forecast for development	Amount (£)
Purchasing of hardware	3 500
Training charity staff to use the new system	3 700
Software development company base fee	28 500
Server	Option 1: Physical server - 6 500 one-off payment Option 2: Cloud server - 300 per month
Upgrades to company infrastructure	7 640
Your pay (Project Lead)	180 per day
Ongoing costs	Amount (£)
Web hosting and online advertising	1 675 per year
IT Support Technician	17 000 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
 - Ezekiel Blair
- two Junior Software Engineers
 - Nieve Calhoun
 - Sulaiman Gallegos
- one Web Development Engineer
 - Filip Munoz
- one Hardware and Networking Technician
 - Eliso Smits
- one Cloud Systems Architect
 - Klement Shepard

Profiles for the project staff

Name	Ezekiel Blair
Title	Senior Software Engineer
Core skills	<ul style="list-style-type: none">• 10 years' experience in deployment of software.• Able to program in multiple languages.• Trained in a range of software testing standards.
Previous experience	<ul style="list-style-type: none">• Proven success as a team leader on a number of large-scale projects for the entertainment sector.
Cost	£70 per hour

Name	Nieve Calhoun
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none">• Able to program in Python, C++ and SQL.• Good knowledge of HTML, CSS and JavaScript.
Previous experience	<ul style="list-style-type: none">• 4 years as an independent web developer.• Recently employed by the software development company.• This will be their first project with this company.
Cost	£40 per hour

Name	Sulaiman Gallegos
Title	Junior Software Engineer
Core skills	<ul style="list-style-type: none"> • Able to program in Python, C++ and SQL. • Certified in a range of software testing standards. • Able to explain complicated processes in non-technical language.
Previous experience	<ul style="list-style-type: none"> • 5 years' experience as a Junior Software Developer. • Has worked on many other projects with Ezekiel Blair (Senior Software Developer).
Cost	£45 per hour

Name	Filip Munoz
Title	Web Development Engineer
Core skills	<ul style="list-style-type: none"> • Trained in full-stack development. • Proficient in front-end and back-development and deployment.
Previous experience	<ul style="list-style-type: none"> • Worked on a number of large-scale projects in the banking and financial sector. • Is an independent contractor who has been hired for this project only.
Cost	£85 per hour

Name	Eliso Smits
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.
Previous experience	<ul style="list-style-type: none"> • Has worked on a number of small scale-projects. • 6 years' experience working as a hardware and network technician in a number of different sectors.
Cost	£42 per hour

Name	Klement Shepard
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"> • Worked as a Network Manager for 5 years in the education sector before joining the software development company. • Has worked for the company as a Junior Software Engineer for 2 years. • Newly promoted to Cloud Systems Architect.
Cost	£78 per hour

Task	Estimated Hours
Upgrade infrastructure	35
Deploy and configure cloud server	22
Deploy and configure physical server	32
Develop module 1: Back-end database	60
Develop module 2: Website integration	54
Develop module 3: Social media and web content management	43
Develop module 4: User interface	55
Develop module 5: Financial management	100
Develop module 6: Customer and animal adoption management	85
Configure web hosting	35
Deploy modules	11 (per module)
Installation of hardware	32
Unit testing	8 (per module)
Integration testing	6 (per module)
Testing of hardware	36
Fixing and regression testing for major fault	9 (per fault)
Fixing and regression testing for minor fault	4 (per fault)
Creating a test plan	5 (per module)
Training charity staff to use the new system	36
User/acceptance testing	14

It is assumed that:

- four minor faults will be found with each module
- a maximum of four major faults will be found throughout the whole project
- the project will begin on 13th November 2023
- staff will work eight hours a day, five days a week.

Snowy Animal Rescue has requested that the job is completed in 15 weeks.