

T Level Technical Qualification in Digital: Digital Production, Design and Development

Sample Assessment Materials

Component: Employer Set Project

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.

Level

3

Total Marks

19

Controlled
hours

3

Task 1

Planning a project

Paper Reference

PXXXXXA

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 3 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 contracted by RBSX Group Ltd to plan and develop their new digital solution.

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 organize 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 this naming convention:

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

RBSX Group Ltd is an organisation that provides financial advice services to customers in the UK. The organisation currently relies on its advisors travelling to meet its clients in person.

After a review of its current digital solutions, the organisation has decided that it needs to develop a new digital solution.

The aims of the new digital solution are to allow:

- clients and advisors to communicate more effectively whilst reducing the need for travel to meetings
- clients to better access advice and recommendations about a range of financial services and products
- the advisors to:
 - access tools for carrying out financial analysis
 - help organise services around client needs (data analysis)

The requirements of the product are:

- an easy to use interface (GUI) with appropriate accessibility features
- to provide two-way communication between advisor and client.
- to have the ability for clients and advisors interact with a 'live feed' of financial information

Planning information

RBSX Group Ltd has forecast that developing the new digital solution will lead to an increase in average annual revenue of 8.75% in the first year with a further increase of at least 15.5% in the second and third year.

RBSX Group Ltd and your manager have provided you with information to help you produce your plan.

Financial information for the project	
Description of the revenue/costs	Amount (£)
Current average annual revenue	1 580 900
Current average annual total costs	985 340
Forecast costs for the development of the new digital solution	Amount (£)
Software development company base fee	50 000
Cost of training and development of internal staff	4 000
Cost of equipment upgrades (laptops, work stations, etc.)	5 000
Cost of software licensing	4 000
Cost of new server	Option 1 - hosted cloud-based server - 230 (per month, ongoing) Option 2 - Physical server 3 500 (single payment)
Cost of infrastructure (networking) upgrades	3 200
Project Leaders pay (you)	200 per day
Forecast ongoing annual costs	Amount (£)
Additional network technician	22 000
Maintenance costs (server, equipment, infrastructure)	2 250

All of your company's software developers are currently working on other projects. Therefore, the senior managers have recruited new members of staff for this project.

Your project development team will consist of:

- One senior software engineers
 - Sarah O'Toole
- Two Junior software engineer
 - Ahad Shafiq
 - Terry Duran
- One database engineer
 - Gina Diaz
- One Network engineer
 - Marius Bronski

Profiles for the new staff

Name	Sarah O'Toole
Job title	Senior Software engineer
Core Skills	<ul style="list-style-type: none">• System and user requirements analysis• Writing and testing code• Refining and rewriting code• Integrating existing software products• Testing and maintaining systems by monitoring and correcting software defects• Python and C#
Previous experience	<ul style="list-style-type: none">• Significant experience of delivering solutions for large multinational corporations• Developed cloud deployed solutions in the financial sector• Worked on large scale, highly transactional, distributed systems• Team leader on a number of different high-risk projects
Cost	Cost £105 per hour

Name	Ahad Shafiq
Job title	Junior Software Engineer
Core Skills	<ul style="list-style-type: none"> • Researching, designing and developing new software programs • Developing existing programs by analysing and identifying areas for modification • C# .NET and JavaScript • The ability to explain complicated processes in non-technical language
Previous experience	<ul style="list-style-type: none"> • Newly graduated university - no previous work experience
Cost	<ul style="list-style-type: none"> • £25 per hour

Name	Terry Duran
Job title	Junior Software Engineer
Core Skills	<ul style="list-style-type: none"> • An excellent working knowledge of hardware, software and programming languages • Specialises in C# .NET and JavaScript • Good knowledge of Python 3, Java and C++ • The ability to develop and interpret technical plans • Excellent communication skills, both written and verbal • The ability to explain complicated processes in non-technical language • An awareness and respect for confidentiality and data protection issues
Previous experience	<ul style="list-style-type: none"> • Experience of delivering cloud deployed solutions for small retail businesses • Significant experience in the computer game development sector
Cost	£45 per hour

Name	Gina Diaz
Job title	Database Engineer
Core Skills	<ul style="list-style-type: none"> • Specialises in PHP, Python 3 and SQL • System and user requirements analysis • In-depth of understanding system security • Development of both back-end data systems and front-end accessibility for end-users • Significant experience of developing logical data model designs • Installation and testing of database management systems (DBMS) and associated hardware and software • Good team working skills
Previous experience	<ul style="list-style-type: none"> • Experience of delivering local and cloud deployed database systems in the retail industry
Cost	£47.50 per hour

Name	Marius Bronski
Job title	Network Engineer
Core Skills	<ul style="list-style-type: none"> • Excellent problem-solving and troubleshooting network problems to maximize network performance • Specialises in planning, implementing, and monitoring computer networks • Experienced in: <ul style="list-style-type: none"> • administering firewalls and maintaining IT security systems • router configuration • upgrading data servers and network equipment • A comprehensive knowledge of network protocols and services such as TCP/IP, DNS, and DHCP
Previous experience	<ul style="list-style-type: none"> • Experience of installing networks and other infrastructure in the retail and entertainment industries
Cost	£73 per hour

Your manager has produced an outline of the key tasks that need to be completed during the project. The table shows the key tasks and the estimated number of work hours it will take to complete each task.

Task	Estimated number of work hours
Upgrade infrastructure	21
Install physical server	7
Develop Module 1 - Back-end database	147
Develop Module 2 - User interface	70
Develop Module 3 - Information feed	126
Develop Module 4 - Investments and savings	115
Develop Module 5 - Data analytics	112
Develop Module 6 - Communications	105
Deploy Modules	7 (per module)
Unit testing	21 (per module)
Integration testing	14 (per module)
Fixing and regression testing for major fault	14 (per fault found)
Fixing and regression testing for minor fault	7 (per fault found)
User/acceptance testing	35
Create a Test plan	14
User Training	21

It is assumed that:

- At least 3 minor faults will be found with each module
- No more than 3 major faults will be found throughout the whole project
- Each member of staff would work 7 hours a day, 5 days a week,
- There will be no staff absences during the project development.

RBSX Group Ltd have requested that the project is completed in 17 weeks.