T Level Technical Qualification in Digital Business Services

Employer-set project (ESP)

Core skills

Digital Business

Project brief

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Contents

Pre-release task

The function of the pre-release task is to allow you the opportunity to familiarise yourself with the sector focus of the main brief. Whilst the pre-release task is not directly assessed, you will be able to use your findings to assist your completion of the assessed tasks. You are therefore encouraged to read all instructions and guidance carefully and complete the pre-release task to the best of your ability.

You are employed as a digital data technician and have been asked to work with an independent retailer of luxury sunglasses and holiday accessories who are based in the UK, but also have an online presence. Internal data shows there has been a drop in high street sales which could be linked to a wider economic decline.

You have been asked by your line manager to complete some initial research to help you prepare for the main project. You will be able to use your findings to inform your approach to the main project and support the business to achieve their key aims and objectives.

You should then undertake research which explores the following:

- e-commerce and the economy
- the value of digitalisation within the retail sector
- the business environment and customer satisfaction
- factors which can drive change
- security and legislation for collecting, storing, and analysing data

Additional guidance

You are allowed internet access for research and a word processing application or other suitable software to record your research notes. Your notes must adhere to the following:

- all information should be contained within 4 pages, excluding references
- all information should be completed electronically using black font, Arial size 12pt and within standard border sizes unless otherwise specified
- you must clearly show where sources have been used to support your own ideas and opinions
- you must clearly reference all sources used to support your own ideas and opinions
- any quotations from websites must be referenced

On completion of the task, you will save in a .pdf format and submit your research to your tutor. If you have not met the conditions above, you can be asked to amend your materials so that they do meet the conditions before the delivery of task 1.

You will be required to sign a declaration of authenticity to confirm that the work produced is your own.

For further guidance, refer to the student handbook – plagiarism guidance and maladministration and malpractice policy located at www.qualhub.co.uk.

Time for completion

There is no restriction on time for completion, however, all pre-release research must be completed and submitted to your tutor no later than 1 week before the start of the employer-set project assessed tasks.

Student instructions

- read the project brief carefully before starting your work
- you must work independently and make your own decisions as to how to approach the tasks within the employer-set project
- you are permitted to bring in and use your own research, carried out in response to the pre-release task, to the supervised sessions but these must be checked for suitability by your tutor. Your research must
    - be contained within 4 pages, excluding references
    - be in black font, Arial 12pt, within standard border sizes
    - clearly show where sources have been used to support your own ideas and opinions
    - clearly reference all sources used to support your own ideas and opinions
    - reference any quotations from websites
- you must clearly name and date all of the work that you produce during each supervised session
- you must submit all of your work to a secure area provided by your tutor at the end of each supervised session following the instructions for each task
- you must not work on the assessment in between supervised sessions
- some tasks will permit the use of the internet for specific reasons – this information will be provided, where relevant, in the additional guidance section for each task

Student information

- this employer-set project will assess your knowledge, understanding and skills from across the core content of the qualification
- tasks 1 and 3 will also assess your English and task 3 will assess your digital skills
- in order to achieve a grade for the core component, you must attempt both of the external examinations and the employer-set project
- the combined marks from these assessments will be aggregated to form the overall core component grade (A* to E and U) – if you do not attempt one of the assessments, or fail to reach the minimum standard across all assessments, you will receive a U grade
- the maximum time you will have to complete all tasks for this employer-set project is 15 hours
    - your tutor will explain how this time is broken down per task and will confirm with you if individual tasks need to be completed across multiple sessions
- at the end of each supervised session, your tutor will collect all employer-set project assessment materials before you leave the room
- you must not take any assessment material outside of the room, for example, via a physical memory device
- you must not upload any work produced to any platform that will allow you to access materials outside of the supervised sessions (including email)
- you can fail to achieve marks if you do not fully meet the requirements of the task, or equally if you are not able to efficiently meet the requirements of the task

Plagiarism

Plagiarism may result in the external assessment task being awarded a U grade.

For further guidance, refer to your student handbook – plagiarism guidance and maladministration and malpractice policy located at www.qualhub.co.uk.

Presentation of work

- all of your work should be completed electronically using black font, Arial size 12pt, and within standard border sizes unless otherwise specified
- all your work should be clearly labelled with the relevant task number and your student details and be legible, for example, front page and headers
- electronic files should be named using the following format – Surname_Initial_learner number_evidence reference, for example, Smith_J_123456789_Task1 for identification purposes – where evidence reference is shown, this should be replaced with the task number for which the work reflects and saved in a .pdf format
- all pages of your work should be numbered in the format page X of Y, where X is the page number and Y is the total number of pages
- you must complete and sign the external assessment cover sheet (EACS) and include it at the front of your assessment task evidence when it is submitted
- you must submit your evidence to the secure area at the end of each session

Brief

You are a digital data technician, working for a data consultancy firm, that offers advice and guidance to businesses on how data analytics can be used to inform change.

Your client, Shades, is a leading retailer of luxury sunglasses in the UK. Established in 1994, Shades now employs 100 full time members of staff and 95 part time. As a retailer their aim is to offer a wide choice of products, as well as expert and impartial advice on choosing them. They serve their customers via a website and through 3 retail stores situated in London, Leeds, and Newcastle. Shades have a stock control warehouse situated in Newcastle which ships products to each store and direct to customers who order online.

Their goals for the coming year include attracting new customers, prompting customers to make additional purchases, and enhancing the value of their brand. Their primary goal is to increase sales through both customer engagement and retention.

Shades keeps a range of internal data which they use to monitor sales performance. This includes:

- sales figures – for in-store and online
- customer data – personal data linked to a loyalty scheme
- a sample of audience survey results (they have yet to decide if this will be rolled out to all customers)

Shades has also recently undertaken a customer survey which has created some raw data that is yet to be processed.

The directors have reviewed the data and noted that in March 2020 the monthly retail in-store sales fell sharply by 5.1% whilst online sales reached a record high of 22.3% based on the previous 12 months sales.

They have heard the term data analytics but are not sure what this is or if it could help the business.

The directors would like you to show them how they could use their own data, along with data from external sources, to support them to achieve their business goals.

You have been asked to consider how Shades could use data analytics to increase customer engagement and retention. You should also consider how this could inform the next spring marketing campaign which is due for release in March next year.

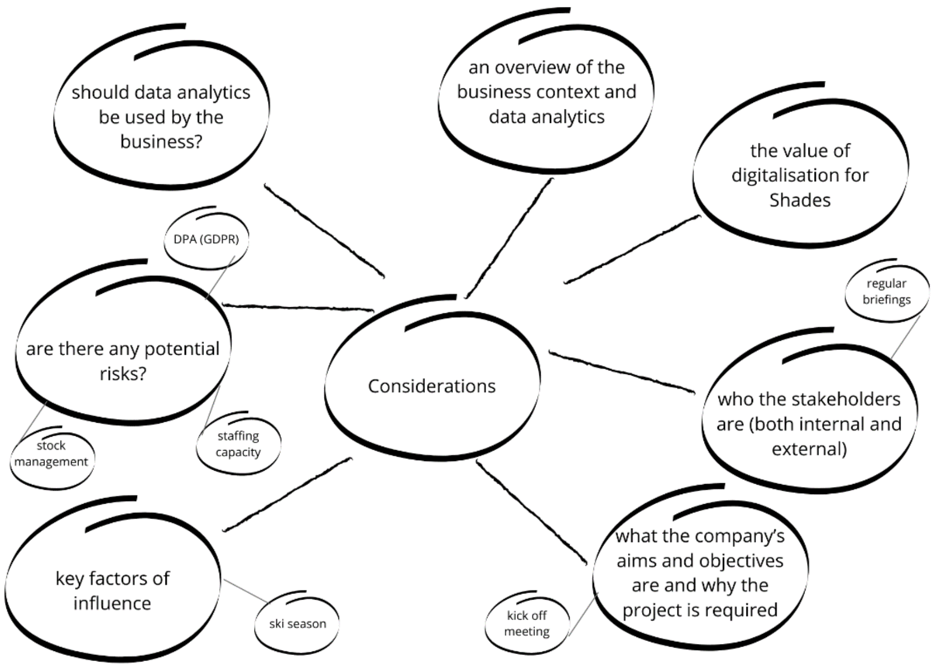
Task 1

You must read the information on all pages provided for this task before starting your response.

(18 marks)
This includes 2 marks for English skills

Scenario:

Your line manager has held an initial planning session with the Shades team and has emailed you the output from this meeting. As a result of the initial planning session, the team have collectively identified the considerations of the project that they would like to see considered. The attached image from the email is shown below:



Your line manager would like you to assess the project considerations and potential risks, as detailed in the image above, alongside the detail provided in the brief, and provide your input to the project. You should create a flowchart (project management tool) for what you consider to be the most effective way of structuring the project, and then update your manager by providing an email response which justifies your decisions.

Instructions for students

Using the information provided above and in the brief, you should create a flow chart which structures the order of the project considerations. You then need to email your line manager, using the provided template, with your justifications for your decisions.

1. Your flowchart should (8 marks):

- provide detail on what you consider to be the most efficient order to consider the project considerations
- have an effective design and communicate the project dependencies

2. Your email should (8 marks + 2 marks for English skills):

- provide justification for the order of project considerations presented in the flowchart

- explain any project dependencies
- explain any potential risks and issues that your decisions could have on the end project

Evidence requirements

A flowchart submitted at the end of task 1 in a .pdf format.

An email, using the template provided, saved in a .pdf format.

A copy of your internet browsing history, saved in a .pdf format.

When you have completed this task, you should save in a .pdf format, and name your file:

- Surname_Initial_learner number_evidence reference, for example: Smith_J_123456789_Task1

Additional guidance

You will be provided with your pre-release research at the start of this task for reference only.

Internet access is available for this task to allow you to use online resources to help you create your flowchart, if needed. A copy of your internet browsing history must be submitted as part of your evidence for this task.

You will be provided with an email template for this task.

You will have access to a word processing application or other suitable software to enable you to complete this task.

On completion of the task, you should save your flowchart and email in a .pdf format before submitting to a secure area. Your tutor will provide you with further details.

Task 1 will be marked at this point; however, you will be able to refer to this for future tasks.

Access to previous class notes/teaching materials is not permitted.

All the materials from the pre-release and the brief will be available throughout the duration of the task 1.

You are permitted to have up to a maximum of 15 minutes rest break during this task. This must be supervised.

Time for completion

Maximum of 3 hours.

Task 2(a)

You must read the information on all pages provided for this task before starting your response.

(12 marks)

Scenario

You have been invited to attend an internal, kick-off meeting with the team that are working on the Shades project.

Your line manager has asked you to prepare a document for the specific meeting agenda item – sourcing and using data to support the key aims of Shades.

The document should explain the type of data you would require, where you could source it, what you would do with it and why you think that those actions would be beneficial in meeting the needs of Shades.

Instructions for students

For this task you are not expected to carry out any research as you are proposing what you consider to be the most appropriate next steps.

1. You should produce documentation for the team meeting that should include (12 marks):

- the type and source of data you would seek to obtain
- what you would do with the data, such as
  - examples of the type of data analysis and technical processes you would apply
  - examples of the potential application of data for meeting the needs of Shades
- a justification of why your approach is suitable to meet the aims of Shades

Evidence requirements

A written document of your approach to sourcing and using data must be saved in a .pdf format before being submitted to a secure area.

When you have completed this task, you should save in a .pdf format, and name your file:

- Surname_Initial_learner number_evidence reference, for example: Smith_J_123456789_Task2A

Additional guidance

You will be provided with your pre-release research at the start of this task for reference only.

You will have access to a word processing application or other suitable software to enable you to complete this task.

Access to the internet or previous class notes/teaching materials is not permitted.

Time for completion

Maximum of 2 hours.

Task 2(b)

You must read the information on all pages provided for this task before starting your response.

(20 marks)

Scenario

Your line manager has now provided you with a selection of valid, reliable data sets and a copy of Shades sample raw data from a pilot audience survey which requires cleansing.

You have been asked to complete 3 separate actions. Firstly, your line manager requires you cleanse the Shades sample export data and then use it to create an Entity Relationship Diagram (ERD). Secondly, you should review and analyse the remaining 3 data sets in order to transform them into meaningful output, by integrating different elements of the data sets, that is useful to meet the aims of Shades. Lastly, your line manager would like a technical update on the steps that you have taken and your rationale for how you have processed the data.

Your line manager has also reminded you that the aims of Shades are:

- to increase sales through both customer engagement and retention (primary aim)
- attract new customers
- prompt customers to make additional purchases
- enhance the value of their brand

Instructions for students

Action 1 (6 marks): You should cleanse the raw data and then create an ERD using the Shades_sample export raw data.

Action 2 (6 marks): Analyse the other 3 data sets (ecom_data_set, Shades_aggregate data, ONS online activity) in order to create a new data set which integrates what you feel are the most effective ways to support the needs of Shades. You should:

- identify trends and/or patterns that you feel would be the most beneficial to support the aims of Shades
- narrow the data into essential features appropriate for the business including variables/queries/formats

Action 3 (8 marks): Finally, you should create a brief informal email to your line manager that:

- provides an overview of the technical actions taken when processing and analysing the data sets
- provides a justification of the choice of data types and formats you have used in the new data set that you feel would meet the needs of Shades

Evidence requirements

An image of your ERD saved in .pdf format.

Your new data set to be saved as a separate spreadsheet in .xlsx format.

Email to line manager, using the template provided saved in a .pdf format.

A copy of your internet browsing history saved in a .pdf format.

When you have completed this task, you should save in a .pdf format, and name your file:

- Surname_Initial_learner number_evidence reference, for example: Smith_J_123456789_Task2B

Additional guidance

You will be provided with your pre-release research at the start of this task for reference only.

Internet access is available for this task to allow you to use online resources to help you create your Entity Relationship Diagram (ERD), if needed. You are not permitted to use the internet for any other purpose, such as research. A copy of your internet browsing history must be submitted as part of your evidence for this task.

You will have access to a word processing, and spreadsheet application, or other suitable software to enable you to complete this task.

All data sets will be provided to enable you to progress through the remainder of the project. Data sets to be issued for this task are:

- Shades_sample exports
- ecom_data_set.xlsx
- ONS_Online activity.xlsx
- Shades_aggregate.xlsx

Previous class notes/teaching materials are not permitted.

You are permitted to have up to a maximum of 15 minutes rest break during this task. This must be supervised.

Time for completion

Maximum of 4 hours.

Task 3

You must read the information on all pages provided for this task before starting your response.

(22 marks)
This includes 2 marks for English and 4 marks for digital skills

Scenario

Your line manager has decided that your approach to processing data was effective and would like you to communicate your ideas to the director of Shades (non-technical audience) in digital slides. Additionally, the director would like to be made aware of the potential impacts on their business and any potential risks if they move forward with the adoption of data analytics. Your line manager has asked you to submit your slides for review to ensure that all areas have been addressed.

Instructions to students

1. You should create digital slides, intended for the director of Shades (non-technical audience) which:

- explain and evaluate the role of data analytics, in this business context, to achieve the business aims and objectives, contextualising the points made with a visualisation of the data (you may use any of the data set provided, including your own created for task 2(b))
- explain the impact on both internal and external stakeholders and any additional factors which may need to be considered when influencing business decisions
- explain any potential risks and possible mitigations, and implications to the business if risks are realised, such as
    - the importance of confidentiality, integrity and availability of information when working with personal and sensitive data
    - any other relevant risks to the business environment

Evidence requirements

A copy of your digital slides saved in .pdf or .pptx format.

A copy of your internet browsing history saved in a .pdf format.

When you have completed this task, you should save in a .pdf format, and name your file:

- Surname_Initial_learner number_evidence reference, for example: Smith_J_123456789_Task3

Additional guidance

You will be provided with your pre-release research for reference only.

You will be also be given a copy of all the original data sets, and the data set you created as part of task 2(b), to use as required. However, the version of the data set submitted at the end of task 2(b) will be the one used for assessment of that task. Any changes you may make to the data set whilst using it to visualise your findings will not apply to your assessment of task 2(b), though will be applicable to this task.

You will have access to a word processing and spreadsheet application, or other suitable software, to enable you to complete this task.

Internet access is available for this task to allow you to use online resources to help you create your data visualisations and digital slides, if needed. You are not permitted to use the internet for any other purpose, such as research. A copy of your internet browsing history must be submitted as part of your evidence for this task.

Access to previous class notes/teaching materials is not permitted.

You are permitted to have up to a maximum of 15 minutes rest break during this task. This must be supervised.

Time for completion

Maximum of 4 hours.

Task 4

You must read the information on all pages provided for this task before starting your response.

(8 marks)

Scenario

Business priorities for your company have now changed and you will soon be moving onto a new project. Before this happens, your line manager (technical audience) wants you to prepare for a post project review meeting and has asked you to complete a reflective evaluation. You have been provided with an internal document which should be used to complete the task.

Instructions to students

1. Your evaluation (8 marks) must apply a reflective technique of your choice and should:

- demonstrate your understanding of the clients' requirements
- demonstrate your own performance
    - discuss what you have achieved
    - discuss what you found most difficult
- demonstrate the processes taken
    - key actions
    - tools and techniques used
- demonstrate the key outcomes
    - evaluate how well your proposed solution has met the needs of the brief
    - evaluate your application of methods used
    - evaluate the effectiveness of the tools and techniques used throughout the project
    - discuss your understanding of the need for further learning and development

Evidence requirements

A word-processed reflective evaluation saved in a .pdf format and submitted via a secure area.

When you have completed this task, you should save in a .pdf format, and name your file:

- Surname_Initial_learner number_evidence reference, for example: Smith_J_123456789_Task4

Additional guidance

You will be provided with copies of all previously completed tasks at the start of this task, for reference only.

You will be provided with an electronic template for the reflective evaluation.

You will have access to a word processing application or other suitable software to enable you to complete this task.

Access to the internet or previous class notes/teaching materials is not permitted.

Time for completion

Maximum of 2 hours.

Document information

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Owner: Head of Assessment Design

Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		December 2020
v1.1	Branding and formatting final updates. NCFE rebrand.		September 2021