



T Level Technical Qualification in Digital Business Services

Occupational specialism assessment (OSA)

Data Technician

Task 1

Assignment brief

T Level Technical Qualification in Digital Business Services Occupational specialism assessment (OSA) (603/6902/4)

Data Technician

Assignment brief

Task 1

Contents

About this assignment	3
Introduction	3
Timings	3
Performance outcomes	4
Scenario	5
About you and your employer	5
About the client	5
Your role	6
Task 1	7
Document information	9

About this assignment

Introduction

This occupational specialism assessment (OSA) is set by NCFE and administered by your provider during a 3 week window. It contains 4 separate tasks which will be completed one after the other during this assessment window.

All 4 tasks will be completed under supervised conditions.

You must complete all tasks in this assignment independently. You are required to sign a declaration of authenticity to confirm that the work is your own. This is to ensure authenticity and to prevent potential malpractice and maladministration. If any evidence was found not to be your own work, it could impact your overall grade.

You will be given a copy of the assignment brief and any relevant supporting information with each task, so you do not have to memorise any information.

Timings

You have a total maximum time of 29 hours to complete all tasks within this assignment, and each task has the following number of hours to complete it:

Task 1 = 5 hours

Task 2 = 10 hours

Task 3 = 8 hours

Task 4 = 6 hours

Individual tasks must be completed within the timescales stated, but it is up to you to decide how long you spend on each part of the task, therefore you should manage your time appropriately.

Details on the separate marks available are provided in each task.

You should attempt to complete all of the tasks.

Read the instructions carefully.

Performance outcomes

Marks will be awarded against the skills and knowledge performance outcomes (POs) as follows:

Task 1

This task is divided into 3 parts (part A, B and C) and carries a total of 40 marks.

These are divided between the following performance outcomes:

- PO1: Source, organise and format data securely in a relevant way for analysis (16 marks)
- PO3: Analyse structured and unstructured data to support business outcomes (8 marks)
- PO5: Apply legal, ethical and professional principles when manipulating data (16 marks)

Scenario

Many businesses use data analytics as it enables them to discover new insights into their business and collect data. This leads to smarter decisions, more efficient operations, higher profits, and happier customers.

Work in a data analytics business is usually done by a small, specialised team of people who are focused on industry.

About you and your employer

Your employer, Rankins Analytics Ltd, specialises in providing decision support solutions for various industries.

You work in the automotive data analytics department at Rankins as a junior data technician. You work with a small team of 3 people, including your data analytics manager, John Hopkins.

John Hopkins reports regularly to Fathema Patel, who is the corporate analytic lead for the leadership group. John is responsible for monitoring the progress and performance of all data departments. John will need you to assist in the following:

- locating and mining data sources
- reviewing and validating sources
- identifying trends, patterns, and possible issues in data sources
- occasionally producing reports for Fathema

About the client

Your client is a successful vehicle dealership business. The client sells new and used vehicles regionally and nationally in the UK. They advertise vehicles online on CarBay marketplace and in the Vehicle Daily Trader. The client wants to change to supplying and selling electric vehicles only. The client has limited knowledge of the electric vehicle market and is unsure how to make this change in the business.

The client's objectives for the next 5 years are:

- short-term:
 - to upskill and educate current and new staff on the electrical vehicle industry and its technology to increase electric vehicle sales
 - to implement an efficient marketing strategy to promote the sales of electric vehicles
- long-term:
 - to supply and sell both new and used electric vehicles with net to zero emissions that cater for both the affordable and prestige markets
 - to retain current customers' loyalty and support customers in the transition from petrol and diesel to electric vehicles
 - to efficiently stock the types of vehicles that are in demand and reflect prices people can afford

The brief

The client has selected Rankins Analytics Ltd to help them make informed decisions about how they are going to change to supplying and selling electrical vehicles only.

As a junior data technician, your role will be to inform the client about the current electric vehicle industry in the UK. You must source and select the most appropriate datasets. You will research both internal and external data sources on the electric vehicles industry. You will source relevant, up-to-date data on the types of vehicle technology, with a focus on consumer perceptions and attitudes towards electric vehicles.

The client wants to see a proposal before the project starts. The client is also concerned about the amount of data the company has on its vehicle owners and drivers. The client wants to know how well their business strategies and business practices protect that data. The company is particularly interested in protecting the data using connective automotive technology.

The client has told you the following things about their business:

- most of their sales are still petrol and diesel new and used vehicles in the UK
- there is a lack of demand for electrical vehicles as consumers are concerned about charging times, costs and the availability of chargers in the UK
- electric vehicles can be charged at home, work and at public charging stations, however, there are a range of technical differences such as charging speed, voltages, battery sizes, mileage ranges and connector types
- there is a government plan to ban all sales for new diesel and petrol vehicles by 2030
- customers who purchase electrical vehicles may be eligible for a grant up to £3,000
- electric vehicle owners pay zero vehicle tax (unless a vehicle is over £40,000)
- installation of vehicle charger at home is £800, and there is an electric home charger grant scheme of up to £350

The client has provided you with vehicle sales information, the business objectives and the electric vehicle incentives available in the UK. Use this information to help you justify the decisions about the project.

Your role

You need to collect and select relevant data from a variety of different sources both internally and externally. This data should meet the client's short- and long-term business objectives and their target audience for this project. You need to judge how useful the data is. You need to combine datasets that do not contain errors. Datasets may need fixing (cleansing) before they can be used by the client, as they are often not properly structured. You must consider all the client's business objectives, even though not all of these will be relevant to every task. This will make sure the work you produce will help the client to make important strategic decisions.

Your role is to identify any trends or patterns you see in the data you collect. You may need to process statistical data that needs to be cleansed, transformed and modelled so it is useful for business decision-making. Once this has been completed, you will present the results on a summarised dashboard.

Throughout the project you must keep a log of the decisions that you have made. The log will include the types of data formatting and the methods for verification and validation of your data. You also need to consider the security measures you took to minimise the risks of control and data handling; you must consider current legislation. You will provide the client with a detailed proposal that helps them to understand fully your insights and recommendations. The client should be able to explore the possible options and possible outcomes based on your data.

Task 1

Time limit and marks available

Maximum time allowed = 5 hours (you can use this time how you want during each session, but task 1 must be completed within this time limit).

(40 marks)

Instructions for students

Part A

The vehicle industry is going through massive changes as the UK prepares to ban the sale of all non-electric vehicles by 2030. You are going to research the electric vehicle market considering the demographics of the people buying them and the environmental factors that contribute to climate change. You will need to make sure you use valid sources for this research.

You must create a written proposal to meet the client's requirements. This must include tables and/or charts which show relevant data related to your research on electric vehicles demographics. The following are suggested focus areas:

- the growing trends and where the electric vehicles market is heading
- the types of electric vehicles available, with a focus on the battery technology and gas emissions
- the most popular types of electric vehicles on the market
- the most affordable electric vehicles per household income

Part B

John Hopkins and the client have given you data from various sources. However, not all of them will be relevant to the project brief, and some may have errors or will need cleaning before the client can use them.

You are required to:

- select the most appropriate datasets from this selection (which will be given to you by your provider from NCFE)
- write a proposal, discussing your choice of datasets and why they are appropriate to the needs of the client and the agency, including why you would, or would not use the datasets

Part C

John has reminded you to consider relevant laws, regulations and security principles in relation to the client's data and how data is used in the connective automotive technology. In a separate section of your proposal, explain which parts of the data are affected by GDPR and the Data Protection Act 2018. You should explain the key principles of data security and explain what security measures you would put in place when handling this data.

Resources

You will have access to the following resources for all parts of the task, plus the original brief:

- the internet, for research purposes in part A
- task 1 datasets:
 - charging_times
 - client_data_payment
 - client_data_personal
 - client_data_products
 - client_data_sales
 - electric_vehicle_attitude_trends
 - electric_vehicles_market_share_trends_uk
 - electric_vehicles_registered_trends_uk
 - household_income_number_vehicles_owned
 - national_charge_point_information
 - operating_costs
 - sales_information
 - vehicle_expenditure
 - vehicle_selling_price
- software applications to select and organise data (for example, Microsoft or Google)
- word processing software (for example, Microsoft or Google)

Evidence required for submission to NCFE

- selected datasets relevant to the project brief
- a single written proposal covering all 3 parts of task 1 (parts A, B and C) which includes the information described in the instructions

Document information

All the material in this document is © NCFE.

'T-LEVELS' is a registered trade mark of the Department for Education.

'T Level' is a registered trade mark of the Institute for Apprenticeships and Technical Education.

'Institute for Apprenticeships & Technical Education' and logo are registered trade marks of the Institute for Apprenticeships and Technical Education.

Owner: Head of Assessment Design