

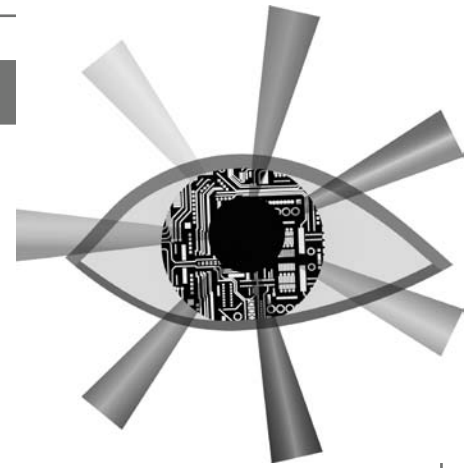
Pearson BTEC Level 3 Nationals

<p>Write your name here</p> <p>Surname <input type="text"/> Forename <input type="text"/></p>		<p>Level</p> <p>3</p>
<p>Learner Registration Number</p> <p><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p>	<p>Centre Number</p> <p><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p>	
<p>Information Technology</p> <p>Unit 2: Creating Systems to Manage Information</p>		<p>Part</p> <p>S</p> <p>Marks</p> <p><input type="text"/></p> <p>Supervised hours</p> <p>10</p>
<p>Diploma and Extended Diploma</p> <p>Sample assessment material for first teaching September 2016</p>		

Instructions

- This task booklet contains material for the completion of the set task under supervised conditions.
 - Specific to each series and this material must only be issued to learners who have been entered to undertake the task on a date set by Pearson in the relevant series.
- This task booklet should be kept securely until the start of the 10-hour supervised assessment period.
- This set task should be undertaken during the assessment period of 1 week timetabled by Pearson.

- The total mark for this paper is 66.



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This paper must be read in conjunction with the unit information in the unit specification and the BTEC Nationals Instructions for Conducting External Assessments (ICEA) document. See Pearson website for details.

The set task should be carried out under supervised conditions.

Electronic templates to show the documents that need to be completed in Activities 2, 3, 4 and 5 will be provided for centres to download for candidate use.

Examples of these templates are reproduced for reference on pages 14, 15 and 16.

Work should be completed on a computer. Internet access is not permitted.

During any break, materials must be kept securely.

The learners must complete their work independently whilst being supervised by the teacher/tutor. Each learner's work must be authenticated before being submitted to Pearson.

Centres are free to arrange the supervised assessment period how they wish provided the 10 hours for producing final outcomes are under the level of control specified, and in accordance with the conduct procedures.

Refer carefully to the instructions in this task booklet and the Instructions for Conducting External Assessments (ICEA) document to ensure that the assessment is supervised correctly. An authentication statement will be required confirming that learner work has been completed as directed.

Learners must not bring anything into the supervised environment or take anything out without teacher/tutor and approval.

Centres are responsible for putting in place appropriate checks to ensure that only permitted material is introduced into the supervised environment.

Maintaining security

- User areas must only be accessible to the individual learners and to named members of staff.
- ↻ Learners can only access their work under supervision.
- ↻ Internet access is not permitted.
- ↻ Learners' work must be regularly backed up. Learners should save their work to their folder using the naming instructions indicated in each activity.
- ↻ Any work learners produce under supervision must be kept secure.
- ↻ Any materials being used by learners must be collected in at the end of each session, stored securely and handed back at the beginning of the next session.

Outcomes for submission

Each learner will need to submit 7 documents using the file names listed.

Activity 1: *activity1erd*:

- as a PDF.

Activity 2: *activity2data*:

- as a PDF.

Activity 3: *activity3design*:

- as a PDF.

Activity 4: *activity4test*:

- as a PDF.

Activity 5: *activity5database* and *activity5testing*:

- as a PDF.

Activity 6: activity6evaluation:

- as a PDF.

A fully completed authentication sheet must be completed by each learner; the prepared notes do not need to be submitted with the final outcomes to Pearson.

Read the set task information carefully.

This contains all the information you need to complete each activity within the set task.

Plan your time carefully to allow for the preparation and completion of all the activities.

You will complete the activities within the set task under supervision and your work will be kept securely during any breaks taken.

You may use a calculator and will have access to a computer.

Internet access is not allowed.

You must work independently throughout the supervised assessment period and should not share your work with other learners.

Your teacher/tutor may clarify the wording that appears in this task but cannot provide any guidance on the completion of the task.

This task must be completed under supervision in timetabled sessions provided by your centre. It is likely that you will be given more than one timetabled session to complete this task.

Outcomes for submission

You will need to submit **7** documents, using the files names listed, on completion of the supervised assessment period. **Activity 1: *activity1erd*:**

- as a PDF.

Activity 2: *activity2data*:

- as a PDF.

Activity 3: *activity3design*:

- as a PDF.

Activity 4: *activity4test*:

- as a PDF.

Activity 5: *activity5database* and *activity5testing*:

- as a PDF.

Activity 6: *activity6evaluation*:

- as a PDF.

You must complete an authentication sheet before you hand your work into your teacher/tutor or invigilator.

You are advised to spend 15 minutes reading the assessment task, information, task instructions and the activities you are to complete. You may make notes and/or highlight information to use in the completion of the documents you need to produce for your task.

Task Scenario

You have been asked to create a database for Bleach & Clean, a cleaning service company based in London.

The company's database records information about cleaning services, staff and customers.

The company offers a variety of cleaning services.

- ↷ Quick clean
- ↷ Weekly clean
- One-off clean
- Spring clean
- End of tenancy clean
- Holiday clean

The company employs 32 cleaners and 4 supervisors.

Each cleaner is given a daily job star rating for the quality of their cleaning jobs.

- ↷ 3 star good
- ↷ 2 star standard
- 1 star poor

The database needs to record each cleaner's details, daily job star ratings and calculate if the cleaner is entitled to the monthly bonus or identify if they need further training.

The supervisors give each cleaner a daily job star rating.

- ↷ The supervisor records the star ratings into the database.
- ↷ When a cleaner receives 60 or more stars per month they are given a bonus.
- When a cleaner receive 25 or less stars per month they are sent on a training course.

You need to:

- design a relational database
 - structure that:
 - matches the data
 - provided
 - - avoids unnecessary duplication of data
 - uses recognised naming
- conventions
 - ensures data integrity

provide accurate validation rules where appropriate ensuring a minimum of:

- - a range check on a suitable field,
 - a presence check on a suitable field
 - a list check or table lookup
- import the data from file SAM2DATA.txt into your database
- structure facilitate database input
 - - input form to register a new cleaner
 - input form to record the cleaners daily job star rating
- provide database outputs:
 - - an alphabetically sorted list of cleaners surnames, grouped by gender, showing full name and gender
 - a list of cleaners with 25 or less stars who require training, showing supervisor and cleaner full names and email addresses
 - a sorted list of cleaners' daily performance, for service ID 6 for 2 or more stars, with cleaner ID and email addresses
 - a list of holiday cleans on the 11/03/17 sorted alphabetically by cleaner surname, showing cleaner full name, cleaner ID and telephone numbers
 - calculate and display the lowest average daily star rated cleaning service, for each supervisor
- create a suitable user interface
- test your database, using appropriate test data (normal, erroneous and extreme), to ensure that the database meets all requirements

- evaluate your database against the given scenario justifying:
 - ● how well your solution meets the requirements of the scenario
 - ● the quality, performance and usability of the database
 - ● the changes made during the development and testing process.

Set Task

You must complete ALL activities within the set task.

Produce your documents using a computer.

Save your documents in your folder ready for submission using the formats and naming conventions indicated.

Activity 1: Entity relationship diagram

Produce an entity relationship diagram (ERD) for the database by normalising the given data to third normal form.

Save your entity relationship diagram in your folder for submission as **activity1erd**:

- as a PDF.

You are advised to spend 1 hour on this activity.

Total for Activity 1 = 8 marks

Activity 2: Data dictionary

Produce a data dictionary for your database using the given document.

Duplicate the table, extend the box space and add extra rows to fit your answer as required.

Save your data dictionary in your folder for submission as **activity2data**:

- as a PDF.

You are advised to spend 1 hour on this activity.

Total for Activity 2 = 8 marks

Activity 3: Design specification

Complete the 'Design specification document'.

Ensure sufficient information is provided for a third party to implement the interface for your solution.

Extend the box space and add extra rows to fit your answer as required.

Save your completed Design specification document in your folder for submission as **activity3design**:

- as a PDF.

You are advised to spend 1 hour and 45 minutes on this activity.

Total for Activity 3 = 6 marks

Activity 4: Testing plan

Use the given 'Test log' to plan how you will test your completed database.

Extend the box space and add extra rows to fit your answer as required.

Save your test plan in your folder for submission as **activity4test**:

- as a PDF.

You are advised to spend 1 hour on this activity.

Total for Activity 4 = 6 marks

Activity 5: Database development

Develop and test your database using the information in the documents you produced for Activities 1 to 4.

Record your database development as annotated screenshots in a single document.

Display your screenshots using the following subheadings:

- tables, including the fields and properties
- table relationships
- queries, including fields and criteria
- the output of your queries
- the forms you have created
- the reports you have created
- evidence of working validation.

Save your screenshots in your folder for submission as **activity5database:**

- as a PDF.

Record your testing including test results, comments and actions taken to resolve issues in the 'Test Log' you created and saved as **activity4test.**

Save your documents in your folder for submission as **activity5testing:**

- as a PDF.

You are advised to spend 4 hours on this activity.

Total for Activity 5 = 26 marks

Activity 6: Evaluation of your database solution

Evaluate your solution.

You should consider:

- how well your solution meets the requirements of the Set Task Brief
- the quality, performance and usability of the database
- the changes made during the development and testing process.

Save your evaluation in your folder for submission as **activity6evaluation:**

-

as a PDF.

You are advised to spend 1 hour on this activity.

Total for Activity 6 = 12 marks

END OF TASK

TOTAL FOR TASK = 66 MARKS

Examples of the documents you need to complete.

Document for use with Activity 2

Data dictionary document (add additional rows and extend the evaluation space as required)

Entity Name	Entity Description	Field Name	Field Description	Data Type	Length	Primary Key	Validation

Design specification document (add additional rows and extend the evaluation space as required) for use with

Fields used, including relevant details of data entry, calculations, presentation of data and navigation required for, qu

Document for use with
Activity

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Document for use with Activities 4 and 5

Test log (add additional rows and extend the evaluation space as required)

Test Number	Purpose of Test	Test Data	Expected Result	Actual Result	Comments and Actions Taken