

Applied GCE

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Information and Communication
Technology (6957)

Paper 01 - Using Database Software



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General Comments

It was pleasing to see that the majority of candidates took into account the clear instructions in the examination paper with regards to the ordering of evidence and the printouts required. On the whole there was a lot less paper submitted which is good. It is understandable that some candidates may need to produce more than the minimum prints required in activity 3 but the best advice, as shown by many candidates, is keep to the task and keep it simple. Succinct focus on the **stated** requirements is much better than submitting documentation that is more suitable as a user guide.

It is apparent that a lot of candidates are taking on board comments made in previous reports with regards to marks that are lost because of poor screenshots with the majority ensuring screenshots were clear. However, there are still some who either crop screenshots too much - missing off names of tables, numbers of records on datasheets, etc, and of printing them out too small or with poor print quality (possibly photocopied) making the evidence illegible.

It is probably worthwhile reiterating here what is deemed acceptable with regards to help and assistance before and during the exam period. The teacher's job is to prepare the candidates for the exam by developing the **technical skills** necessary to create a database at this level. The scenario is released prior to the examination. Teachers are allowed and encouraged to discuss with their students possible answers to the questions. The scenario had very clear tasks in order to aid this process. At this point the teacher does not know the final construction of the dataset so that any datasets they give to their students for practice can only be guesswork.

Once the teacher becomes aware of what is in the live data files they should no longer discuss the examination in context although they are allowed to discuss with the students aspects of databases in general terms.

For example they can revise the generation of primary keys as long as the examination data files are not used as an example. Therefore, questions raised about the data file prior to the examination going live would appear to suggest that this may not be happening. The data file(s) in any examination contain data that the candidates have to accept as being the way we want it. It is up to them how they cope with any anomalies that may be present. This is true of any 'live' situation in the real world where they would have to make their own decisions about how to proceed.

Administration

On the whole administration is sound but there are still some candidates losing one or two standard ways of working marks in the paper by not assembling the tasks in the correct order or, where they are in the correct order, attaching them to the answer booklet incorrectly. When the examiner opens the booklet they should be greeted with activity 1 facing toward them ready to mark this is not always the case ie when the examiner opens the booklet they are faced with the back of the activity 6. Very few candidates do not ensure their name, centre number etc is present on every print though it does still occur.

Activity 1

A new approach to this activity in this examination paper in that the tasks were very clearly presented in the scenario. Most candidates fully took this into account when answering this question which was good. Overall, candidates did very well with marks in the section b. However, section a is still proving problematic with regards to candidates not understanding how to write down what a **process** is.

Various approaches were taken. For example:

1. Reiterating what the input and output is
*Quantity of product * Cost of product*
2. Too much text
The user is going to put the quantity in and then the database will find the cost of that product and it will be multiplied together.

Answers are expected to be succinct and actually clearly **state** what the **process** is. Very rarely are more than four to six words needed in answers. For example:

Calculate the total cost
Reduce stock levels

The key, as noted in previous reports, is to use a **verb** correctly, what the **DATABASE** is expected to do; not what the **OPERATOR** of the database is expected to do.

Where candidates had understood this, and had practised it from the scenario, they did well.

It was nice to see many candidates taking into account that the entire activity could fit onto one sheet of A4 paper.

Activity 2

On the whole this question was well answered and it was particularly pleasing to see the majority of candidates had read the examination paper and only provided the evidence requested. This good practice and they are to be commended for it.

However, there were some who did not, submitting far too much evidence or evidence in the incorrect order.

It was interesting to note that some candidates chose to ignore specific comments regarding the amount of different products that could be ordered at any one time choosing to provide a five table solution. This was not penalised but they should be aware that what they practise prior to the exam with their teachers is not always going to be the ideal solution in the examination. They should always take into account what the examination paper says.

Most candidates had a relationship diagram that included the four tables the data suggested they needed and this aspect of the activity was very well evidenced. Most had the relationships between the tables and primary keys correct with referential integrity correctly enforced.

However, there were a lot of candidates who did not achieve the mark for correct data types because they either chose to leave all fields as text or by missing either the currency or one or more of the number data types.

It was pleasing to see the majority of candidates could identify the evidence required for each of the four different validation techniques with some very good evidence put forward for format checks eg "ORD"000 or appropriate inputs masks. However, some candidates failed to understand that the use of an appropriate input mask is a format check and preferred to use inbuilt formatting options such as the simple selection of a date format etc.

It was clear to see that candidates did understand the purpose of a presence check and could apply it to a field but quite a few did not take into account the scenario which clearly stated the fact that the **Postcode** had to be present. The instructions were to apply a suitable presence check. Validation should always take into account what has been said in the scenario. If specifics are mentioned then it is expected candidates will apply validation around them.

Candidates also proved they could use combo boxes etc correctly with many including these as their form of a list check. However, quite a few omitted to provide evidence that they had set the limit to list option to "yes".

With regards to section D candidates generally did well and seem to have grasped an understanding of what is needed. Centres seem to have prepared candidates better to evidence this though there were still some candidates who are cropping off the number of records present in the table. The marks for this aspect of the question can only be awarded if the examiner can clearly see what table it is and the total number of records present.

Activity 3

All candidates attempted this activity which was pleasing to see. On the whole, the evidence for this was a mixed.

Section a required the candidates to create an order form. The examination paper clearly stated what fields to include and it was pleasing to see the majority of candidates took this on board and ensured they were present.

The examination paper clearly stated that the Order Date should be automatically set to the current date. Again, quite a lot of candidates concluded that as this was something they were specifically being asked to do evidence showing how it was done should be present. However, some candidates failed to show how this was automatically set. The same applies to the calculation of the total cost of the order. It cannot be stressed enough if the examination paper is asking the candidates to do something the examiners are going to need to see how it was done to award the associated marks. This means showing the calculations in full. Candidates did generally ensure if they named fields appropriately on the form but there were some who submitted evidence that was not really appropriate eg Text23*Text45.

With regards to generating the Order Number there were some very good methods used on the form itself. For example formulae entered directly into the field, formulae entered into the default value of the field on the form. Others chose to use a query to generate the key and base the form on that. Others used "ORD"000 for the format of the Order Number in the table and then set the data type as AutoNumber. All methods were acceptable providing there was evidence of how they had been generated. Unfortunately, not all candidates evidenced the generation of the key itself.

At this point it is worthwhile discussing the use of AutoNumbers. They were a valid way to generate the keys in this particular examination paper for both the OrderNumber and the CustomerID. However, this may not be suitable in every examination paper so candidates need to be able to use a variety of methods in order to generate keys.

It was pleasing to see that many candidates could customise a form well. This included the use of a good title customising the layout to include field widths suitable for the data in them, appropriate field labels, appropriate field order etc.

With regards to the update query that was needed for section b candidates usually attempted it. A lot of the time it was correct. If candidates did go wrong at this point it was usually because they were not using the "update to" and criteria rows appropriately or they truncated the criteria so that the examiner could not determine whether it was correct.

Evidence of saving either the order or customer was generally good where it had been fully attempted though some candidates lost a mark because they failed to show the save button had been created. The majority of candidates did recognise the need to run the actions carried out from one button.

Section f was very well attempted with most candidates picking up at least three marks. The mark that was lost tended to be where they did not clearly show the form was blank ie went to a new record, set in add mode etc.

Activity 4

Overall, the candidates did well on this activity with many achieving the full 9 marks with evidence of good understanding and skill.

Where marks were lost it tended to be either misspelling the customer details in the testing of adding the valid customer or the method used to generate the key meant the customer ID was incorrect i.e. it should have had a minimum value of 21001.

With regards to the valid order, if marks were lost it was because candidates did not include all of the screenshots required e.g. missing out showing the saved record in the order table and then the updated record in the product table.

Activity 5

Most candidates who had managed their time well got onto this activity and managed to complete it.

Quite a lot of candidates were able to create the query which would correctly identify only the products that needed re-ordering though some missed out the fact that the criteria should have ensured both below and on the reorder level was required.

With regards to the report itself the evidence varied. Quite a lot of candidates demonstrated the use of grouping really well with all of the supplier details and the labels for the products present in the group header. However, some did not group at all or others included multiple levels of grouping which was not really required.

Calculations were met with varying degrees of success. Where they had been attempted the calculation for the total cost per product tended to be well proven though some candidates did not realise the monetary amounts are best displayed as currency.

Fewer candidates attempted the group footer calculation where they were supposed to determine how many products overall needed ordering. Those that did always included suitable labels though the calculation itself may have been incorrect.

It was pleasing to see that candidates did make a good attempt at formatting the report with many gaining the full three marks. However, some did not check their data carefully enough for presentation i.e. checking for truncation of labels or fields etc and, as mentioned above, some did not see the need to display monetary amounts appropriately.

Activity 6

It was very nice to see that the majority of candidates had taken note of what was asked of them in the examination paper and carefully ensured their evaluation reflected this with some excellent, well thought evaluations raising some very good points about future functionality. However, others still see it as an opportunity to talk about how well they have completed the examination questions or give a running commentary of what they did to build it. To reiterate the first part of the evaluation should see the candidates evaluate how well their database carries out the tasks from the scenario. The second should see them discuss further functionality.

Some evaluations were based around what the customers would find wrong with database or what they should be allowed to do in future which was surprising as the scenario did clearly talk about Roderic and the fact that it was a database for him.

There were some very good evaluative comments made about how well the databases carried out the tasks with thoughtful reasons about how particular aspects made using the database easier etc.

The second part of the evaluation was also well done by many ie there were detailed discussions about further functionality. The database purposely had many things wrong with it in order to give candidates points for discussion in their evaluation and a lot picked up on this.

Major limits identified and discussed included:

- the fact that only one particular product could be ordered at a time.
- only one cost was present meaning Roderic never actually made a profit.
- drop down boxes becoming inefficient the more items in them
- adding a new customer from the order form did not refresh the customers in the drop down list
- there was no main menu
- no checking to see if stock was present before ordering
- no deleting
- no archiving and many more.

The evaluations were a pleasure to read at times and clearly showed that even if candidates could not do all aspects of the practical tasks they did understand the power of databases and how they can be applied.

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