Principal Examiner Feedback

Summer 2013

GCE Applied ICT (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. 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 specified and keep it simple.

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, truncating macro screenshots etc, and of printing them out too small or with poor print quality 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.

The content of the live data files is only made available to candidates in the exam sessions and there must be no discussions related to these at any stage, until the exam window has closed.

The data file(s) in any examination contain data that the candidates should accept as correct. 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. Candidates are not required to create any new fields, they should use all and only what they have been given.

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 or the work hole punched in the right-hand corner as opposed to left. This adds to the time taken to mark an examination paper. Very few candidates do not ensure their name; centre number etc is present on every print, but it does still occur.

Activity 1

It was expected that this question would be well answered and it was pleasing to see that, in many instances, it was. However, there were quite a few candidates who achieved very few of the marks.

Part A required the **identification** of two reasons and accompanying **explanations**. Where students did not gain marks it was because they did not give reasons at all or the explanations were not focussed enough.

Part B was well answered in many cases too. However, at times students did not show differentiation between what would be classed as 'generation' and what would be classed as 'output'. It is worth noting the storing of any data will always be classed as output.

Activity 2

On the whole this question was well answered which was particularly pleasing to see.

Candidates tended to do very well indeed in the A section. Many achieved all seven marks and picked up part of B here. If marks were lost it was usually because the composite key had not been shown or candidates attempted to put forward a three table solution. It is worth noting at A2 level there will never be a three table solution. It is expected candidates can work beyond that.

What was surprising was how many candidates did not pick up the mark for using correct data types, particularly as this exam did not include any yes/no fields which is where candidates normally fall down.

Quite a lot achieved full marks in the validation section which was nice to see. However, some are still applying validation inappropriately. We are expecting a format check to be applied to a **text** field only and that it will include an appropriate input mask. Applying formats to dates or generated fields will not attract any marks. Similarly applying a presence check to a primary key is not appropriate. We also expect limit to list to be set to yes for any combo boxes that have been used.

Most candidates achieved all four marks for the importation of records. However, some do still lose marks for not showing the actual number of records in each table. Examiners cannot award marks without seeing this.

Activity 3

All candidates attempted this activity which was pleasing to see.

However, it is still worth noting that activity 3 is really all about the **design view** aspects of building the forms and generating the processes. Candidates are specifically told what screenshots should be design view and what screenshots should be form view. Quite a few candidates included far too much evidence that was not really of any use ie the system working and what happens when they complete the forms etc. Activity 4 is designed to test the system and show it working so we do not need to see any evidence of it working in this activity unless specifically requested. This is all about building the system. The majority of marks in this section are awarded for the design view aspects.

Most candidates built the form that would allow the user to add a new student and it was nice to see how many had made a real effort with regards to customisation. Some very user friendly forms were seen. Most had attempted to generate the StudentID and the majority did it very well. A number of different methods were seen and any that generated automatically and worked were given the marks. Where marks were lost here it was generally because the formula was truncated, the generation was not shown at all, +1 was missing or students had put the forename before the surname.

The saving method for this form was generally well documented and it was pleasing to see how many different methods were put forward for this. Some had chosen to use an append query and call this in the macro. Others had generated the key field on the form and used Set Value to copy it into the primary key. This was generally used in conjunction with the save command. Others had generated the key using a query and built the form around this query. Where marks were lost here it was generally because the query had been truncated. It is worth noting we must see every aspect of the query. Many candidates did show which fields would be appended to but had truncated where the data was being picked up from. Others had generated the key on the form but had missed out the Set Value etc from the macro code. The examiners need to be confident a successful save would take place before they will award marks for the save process itself.

The majority of candidates evidenced checking the student name and date of birth was present and displaying the save message. Some students had chosen to add presence checks in activity 2. This is fine but examiners would need to see evidence of this in activity 3 too to be able to award marks.

The majority of candidates did document the save button and accompanying macro/code well.

When it came to the menu for adding a new fitness test, it was surprising how many candidates did not create a menu and chose to create an input form. The paper clearly asked for a menu. However, the mark was associated with the naming of the button so the majority did achieve it. It

was really nice to see how many different methods were used to generate the TestID and month name. Some were very ingenious. Where marks were lost here it tended to be because candidates had not shown the generation at all, had not ensured it was a fully generated automatically, or had truncated the evidence.

Storing the new test was generally well evidenced. The majority chose to use an append query, however, some did use the Set Value and save command method. Any method used where examiners were confident the data would save was awarded the marks. Storing the new test records was not so well evidenced. Where it had been shown candidates did usually achieve all of the marks. However, some did not include the evidence at all.

It was expected that part d would require the use of a form and subform. It was very surprising to find that many students did not realise that the user would want to add all of the test results for one student at the same time. Many created forms that would only allow the entry of one result meaning the user would have to close and open the form again in order to enter another. Others had included a subform but did not take into account there would only be the need to see the student and test details once ie one student, one test, **many** results.

Overall, it was really, really nice to see how well this activity was attempted and the many different methods of achieving what was required. The only downside really is that some candidates still do not realise that if they want the marks on offer they must ensure the examiner can clearly see the evidence. It is worthwhile asking themselves the question – *'if I did not know how this had been done, would I be able to work it out from the screenshots I have provided?'* - This does not mean lots of annotations/screenshots have to be present. Indeed, we try to guide the candidates into the screenshots we want. However, if what we have asked for does not fully show what they have done they should include more. The top and bottom of it is it means have I included all of my queries, have I included evidence of every part of formulae used, are my query columns wide enough, are my screenshots clear to see etc.

Activity 4

Overall, the candidates did well on this activity with many achieving full marks.

For part a where marks were lost it tended to be because the candidates had not shown the tables asked for.

For part b we expected to see all of the results being entered in the form and then the matching records in table. This is where the form and subform method really cut down on the amount of screenshots required.

Part c was very well evidenced with the majority getting all of the marks available. Where marks were lost it was down to incorrect spellings, data in the table not matching that on the form, clear evidence that the record had been manually entered into the table, or cropping the message screenshot too far. We expect to see the form too when a message is displayed.

Part d was also very well evidenced. Where marks were lost it was down to either cropping the form away and only showing the message or an inappropriate message eg default message.

Activity 5

It was pleasing to see how many candidates evidenced all 6 marks for the query correctly. A lot had used the correct criteria, max and min and named the generated fields as requested.

However, many did not appear to read the question properly. When candidates are given specific data for queries we are expecting them to use it. Some chose to allow the user to enter a student ID via a parameter. This was not what this question was testing, it was testing their ability to enter particular, given criteria. Marks were also lost when candidates chose to name the generated fields on the report as opposed to in the query where they were asked to. Again, we specifically wanted to test that they could name fields within a query not that they could do this on a report.

With regards to the report itself, there were many instances of very good, well customised, well presented reports with candidates achieving all of the marks available. However, it is clear some candidates do not fully understand grouping. The question in the paper will identify how many levels of grouping are required. In this instance it was clear only one was required as the paper only mentioned one. Where there is a group it is expected this will contain the labels from the 'many side' of the relationship in the group header. Many candidates included the correct fields in the group header but chose to put the 'many side' labels in the detail section or in the page header or elsewhere.

The majority of candidates ensured there was a page break after each student and used portrait orientation as specified. Most customised well. However, there are still instances where labels are not fully fit for purpose, data is truncated or there is too much space between records – eg could the results for a single student could clearly fit on one page yet takes up two to three pages.

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. Please stress to candidates that we do not want to see screenshots of how they have built aspects. We have already seen that in activity 3 and candidates can waste a lot of valuable time doing this.

For example

Mark Band 1

Part A
I did not get all of activity 3 done because I could not generate the StudentID. I did manage to get the letters for their names but could not find the highest number or add one onto it. The save did not work properly because my query did not work.

Part B
To make the database better I would make sure the StudentID was calculated correctly and that the save bit worked properly. I would work faster so that I could finish all of the activities. *(This is all about what should already have been done).*

Mark Band 2
Part A
I have a created a New Student Form **which I think is very good**. The student can enter their details and click save and it will save correctly. The StudentID is automatically generated. If anything is missing an error message will appear or if everything is ok a save message will appear. **This should make it easier for the student to enter their data and should mean that they will know what is wrong if the save does not take place. (***This is very descriptive and not really evaluative apart from what is highlighted in bold which is quite basic. It also misidentifies the user. This is quite common.)*

Part B
I think the main menu should have more buttons because there is no way to navigate at the minute and the student would have to know which form to load up if they wanted to add their details or results. I also think there should be edit and delete facilities as they are not there at the minute. More validation could be used too so that less mistakes would be made. *(These are improvements but are general improvements overall).*

Mark Band 3

Part A

Mr McGarry needed a form that would allow him to enter a new student. I have built that and think it is fully fit for purpose compared to the requirements. I think this because I have made the form incredibly user friendly. I have ensured the fields are present in a logical order so it goes from forename to surname and then date of birth. I think Mr McGarry would become frustrated if he had to enter the surname then jump to date of birth and then forename etc. I have also ensured that he knows exactly where data is required. I have done this by including asterisks. This is a very common method for showing where data is required. The generation of the StudentID is 100% automatic and 100% correct. This will certainly save Mr McGarry time when it comes to adding a new ID. If this was not present then it would take him quite a while to work out what the highest existing number if and add 1 to it and to make sure he concatenates correctly. I have disabled this field because it could cause him problems when it comes to saving if he has accidently deleted it or has not followed the correct format. The save process itself fully meets requirements too I think. This is not just because it displays suitable messages but because it is actually impossible to save if all requirements have not been met……….. and so on.

(This is fully evaluative. As you can see we don't need to know how they have done something as we have seen that in activity 3, we want to know what they think of what they have done with regards to how it makes the system easier to use for the user(s). Good candidates can see the weaknesses in the prototype and can take them forward into the second section where they have to make recommendations for further functionality. It is also clear to see the candidate recognises the user.)

Part B

Whist I do think the prototype is good and would save Mr McGarry a lot of time and effort it is not perfect.

The adding a new test is not perfect. What would happen if Mr McGarry did not add the test during the month in question? For example, he may not create the June test until the beginning of July and he may want to enter the June results then. This would be impossible and, I am sure, very frustrating for him. This is because it automatically generates the month from the current date. I think a better method would have been for a message to be displayed asking him to click yes if he wants to use the current month, if he does then the process would work as normal, however, if he clicked no then a form would be displayed when he could pick the month himself and then this would be used in the generation of the TestID key. I think that would be much better for him. I also noticed that there were some inconsistencies in the data. The data file showed that the TestID used an underscore, whereas the exam paper asked me to use a hyphen. This would need to be highlighted to Mr McGarry so that he could decide which format he wanted. The method for generating the key may need to be updated to reflect this…….. and so on.

(There are always things wrong with the prototype and we will be looking for them picking up on that here and talking about what they think really

should have been done to extend the functionality. We also look for sensible ideas with regards to the actual database in question for new functionality that is not present in the prototype. There are always many areas where the database could be developed).

Grade Boundaries

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