General Certificate of Education
June 2007
Advanced Award
12 Unit Award

APPLIED INFORMATION AND   **IT09/TN**
COMMUNICATION TECHNOLOGY
Unit 9   Software Development

1 April to 21 June 2007

AQA-set Assignment – Teachers' Notes

CONFIDENTIAL - OPEN ON OR AFTER 1 April 2007

IT09/TN

Unit 9: Software Development (IT09)
Teachers' Notes

1 Guidance for teachers

It is expected that the assessment material will be presented to candidates **only after they have been adequately prepared**. Candidates must have an understanding of the content of the unit and the necessary skills to complete the assignment.

Teachers are strongly advised to familiarise themselves with the contents of the *Candidate Booklet* before issuing it to candidates. In addition to this booklet, teachers are also advised to ensure their familiarity with the *Specification* and the *Teachers' Guide* for this unit.

Teachers are not permitted to alter or vary in any way the task that comprises the assignment. The scenario given in this assignment is only valid for the current examination series.

This unit is assessed by external examiners. The unit is assessed through an AQA-set assignment which is researched and prepared by candidates in investigation time and completed during 20 hours of controlled conditions.

This is the only form of assessment for this unit. Only paper-based evidence will be accepted; the external examiners will only be able to award marks based on this evidence. This should be borne in mind when advising candidates.

It is important for teachers to ensure that candidates are aware of the time constraints for this unit, and that candidates will need to complete all of the investigation work before the start of the controlled conditions. They will **not** be allowed to bring in, or submit to the teacher, additional material after the start of the first controlled session.

Candidates are **not** permitted to carry out any work directly connected with this assignment outside the permitted period of 1 April to 21 June 2007. Work to be submitted by candidates for assessment must be sent to the AQA examiner by **21 June 2007**. Within this timeframe, the timetabling of investigation time and controlled sessions is for the centre to decide.

Centres should arrange for the scripts to be sent to the examiner using the pre-paid Parcelforce service, ensuring that the exam despatch log is signed by the Parcelforce representative upon collection.

Centres will be required to provide AQA with details of the timetabling of the controlled sessions in advance, so that this information can be used by the JCQ Examinations Inspectorate. Inspectors will be visiting centres to check that controlled conditions are being conducted in accordance with the rules set by AQA. Heads of Centres are obliged to make arrangements that will facilitate the work of the JCQ Examinations Inspectorate.

Centres are reminded that candidates' assignments will not normally be returned to centres. They may, however, be requested by centres under the Access to Scripts arrangements.

2 Providing guidance for candidates

It is expected that the teacher will discuss in detail the requirements of the assignment with candidates prior to starting the assignment. In particular, it should be stressed that candidates must provide paper-based evidence that proves to the examiner that they have met the assessment requirements.

As far as possible, candidates should be encouraged to identify an appropriate client to enable them to attempt the assignment. The teacher should provide support at this stage to ensure that the client chosen is appropriate. Where an appropriate client cannot be found it is acceptable, as a last resort, for the teacher to act as the client. In this case, teachers should ensure that they provide an appropriate scenario for the candidate to work from. Candidates must **not** act as their own client, or use another candidate as the client for their assignment.

Where the teacher or client provides the candidate with material, this should be clearly identified, and included with the work submitted to the examiner. Under no circumstances should the teacher provide pre-written client specifications for the candidates. It is recommended that, as far as possible, candidates use different clients for this assignment. It is important that teachers ensure that the design and the system produced is each candidate's own work and is not produced in conjunction with other candidates.

Whilst candidates should make every effort to produce a fully functional software system to meet the needs of their client, it is acceptable for the final system to contain some errors. However, it is essential that the candidate documents these clearly, and identifies future work required to rectify any errors.

The centre should advise candidates that they should study carefully the *What you should hand in* section of the *Candidate Booklet*. Centres may wish to advise candidates that when planning for controlled conditions they should allow sufficient time to complete all of the required items.

Candidates should be made aware that a different assignment will be set for each examination series.

3   What candidates should hand in

When the assignment has been completed, each candidate should hand in the following.

Completed during the investigation time:

(a)   A time plan to show how the candidate initially intended to complete the work for this assignment (for both the investigation time and the 20 hours of controlled conditions). *(up to 2 marks)*

(b)   Background information about the client and identification of the intended user(s) of the system, including the skill levels of the user(s). *(up to 4 marks)*

(c)   A software specification, agreed with the client, including a list of client needs. *(up to 9 marks)*

(d)   Evaluation criteria to be used to test that the software system meets the client needs. *(up to 4 marks)*

(e)   A detailed design for a modular software system, showing that the candidate has used standard design methods. This should be sufficient for use by a competent third party to implement the system. The design produced should also include information about any error handling techniques that will be used. *(up to 9 marks)*

(f)   Evidence of a testing strategy for their software system. This should include a full test plan, and appropriate sets of test data for modular and system testing. *(up to 4 marks)*

Turn over ▶

Completed during the controlled conditions:

(g)   Evidence that the implementation of the completed software system has been fully tested using the tests described in (f), including evidence of the results produced.
(up to 11 marks)

(h)   Documentation to show how the modular software system they have designed has been implemented, including annotated listings of the program code or database structure. The annotation should indicate the key features of the system.   *(up to 13 marks)*

(i)   Sufficient instructions to allow a new user to install and access the system, and use its main features.   *(up to 2 marks)*

(j)   An evaluation of their software system based on the client needs (c) and user skills (b), as well as the evaluation criteria (d).   *(up to 4 marks)*

(k)   Their initial time plan (a), updated by hand to show how they actually used their time during the investigation time and the controlled conditions.   *(up to 2 marks)*

(l)   An evaluation of the candidate's own performance in completing the work, including their use of the time available.   *(up to 2 marks)*

In addition, the Quality of Written Communication throughout the assignment will be assessed.
(up to 4 marks)

(Total = 70 marks)

The documentation should also provide evidence of managing work effectively, such as using version numbering, and appropriate file and folder names.

The work that candidates hand in should be organised in an appropriate order and page numbered. They should put their name, centre number and candidate number on each page. Each candidate's work should be kept securely together e.g. using treasury tags. Plastic wallets and ring binders must **not** be used. Each of the items (a)–(l) should be clearly identified.

4   The investigation time

The investigation time begins when candidates are handed the *Candidate Booklet*. This must occur at the first convenient time after the date printed on the front cover of the booklet.

During the investigation time, candidates will be expected to carry out all the research, planning and design work needed for the assignment. This may include receiving advice from the teacher, as well as work undertaken at home. However, teachers should not be directing candidates as to how to carry out the work. Candidates may spend as much time as they wish on this stage of the assignment. The material produced by candidates for items (a)–(f) should be produced in hard copy format (i.e. printed or handwritten on paper), placed in a preparatory folder and handed to the teacher before the start of the controlled conditions.

5 Preparatory folder

This folder should contain, in hard copy format, all of the items (a)–(f) which candidates should have completed before starting work under controlled conditions.

The supervising teacher is responsible for checking the contents of the preparatory folders to ensure that candidates only have access to the materials that are allowed during the controlled conditions.

6 Providing computer facilities

Teachers must ensure that suitable equipment is available to candidates to enable them to complete their work effectively.

There is no requirement for candidates to submit work that has been printed in colour. However, candidates should be advised to annotate any black and white printouts to indicate to the examiner the colours that have been used in their software system.

Centres could create separate computer user areas (on computers or servers used by candidates) in which candidates will save their work. Centres must ensure that these user areas cannot be accessed by candidates outside controlled sessions. Access to these areas must be directed and controlled by the teacher. This is most easily achieved by the changing of passwords (which would be unknown to candidates until the start of the next controlled session), or by use of an electronic time-lock, although other electronic means are acceptable.

Candidates must **not** be able to access the Internet, intranet or any personal or shared directories during controlled sessions, and the centre must make provision for such access to be prevented.

Candidates are **not** allowed any access to removable media during controlled sessions.

Turn over for the next section

7 The controlled conditions

'Controlled conditions' means 'examination conditions'. Candidates **must** work independently and in silence. However, candidates may receive appropriate assistance to resolve difficulties caused by equipment failure.

During the 20 hours of controlled conditions, candidates must complete the items listed in items (g)–(l). During this time candidates have unlimited access to the hard copy material in their preparatory folder. Candidates **must not** have access to **any** electronic files produced outside controlled conditions.

Teachers will need to tell candidates when the 20 hours of controlled conditions have been timetabled. Particularly important is the time and date when the controlled conditions will end. The final deadline set by the centre cannot exceed the AQA deadline of 21 June 2007.

The supervising teacher must collect in the preparatory folders after each controlled session, and give them out at the start of the next. During the controlled conditions, candidates may **not** have access to any additional material other than their preparatory folder. Once the period of controlled conditions has started, candidates are **not** permitted to bring any additional material to the controlled sessions. Between controlled sessions they are **not** permitted access to their preparatory folder or to the computer user areas they use for this unit's assessment work.

Teachers should ensure that any candidate who is unavoidably absent from a controlled session is given the opportunity to make up the time missed, provided that the AQA deadline is still met.

8 Authenticating candidates' work

Teachers must sign a *Centre Declaration Sheet* to authenticate candidates' work, and to confirm that the rules for controlled conditions have been followed.

The candidates must each complete a *Candidate Record Form* to confirm that the work is their own.

Teachers and candidates should have read and must adhere to the Joint Council for Qualifications documentation regarding plagiarism.

The centre must also use the *Record of Controlled Sessions* form on page 7 of this booklet to record the dates and times of controlled sessions. This record must be signed by both the supervising teacher(s) and the Head of Centre to confirm the dates on which the controlled sessions took place. The form must be detached from the booklet and sent to the AQA examiner with the candidates' work.

All of these forms can be downloaded from the AQA Website www.aqa.org.uk.

END OF TEACHERS' NOTES

AQA
ASSESSMENT and
QUALIFICATIONS
ALLIANCE

Record of Controlled Sessions
2007

GCE Applied ICT
Unit 9: Software Development (IT09)

Centre name: ....   Centre Number: ☐ ☐ ☐ ☐ ☐

Date	Time (from/to)	Number of hours and minutes	Signature of supervising teacher(s)
Total number of hours			**Use additional sheets if necessary**

Declaration

I confirm that, on the occasions listed above, candidates' AQA-assessed work was produced under controlled conditions as specified in the *Teachers' Notes* and in the terms and conditions of the GCE in Applied ICT Specification, and that every reasonable step has been taken to ensure that the work presented is that of the candidates named. Any assistance given to candidates beyond that given to the class as a whole and beyond that described in the Specification has been recorded on the *Externally-assessed work: Candidate Record Form.*

Signature of Head of Centre:...   Date: ....

There are no instructions printed on this page