OCR ☆

AS GCE INFORMATION AND COMMUNICATION TECHNOLOGY
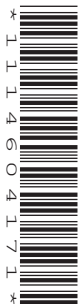
G062/01 Structured ICT Tasks

MARK SCHEME

Instructions for Examination Officer:
Please inform the Head of ICT, and any GCE assessors for this unit, that this document has arrived in your Centre.

MAY 2014

INSTRUCTIONS TO TEACHERS

- This mark scheme must be kept secure.
- Its contents may not be divulged to candidates until after the publication of results by OCR.

Centre Name	Centre Number
Candidate Name	Candidate Number

- This mark scheme must be kept secure by the examinations officer and not given to the teacher until the teacher is ready to mark the work. The examinations officer can release to teachers the mark schemes for individual tasks if required for marking before other tasks are completed.
- This mark scheme is intended as a working document for Centres as well as an aid to moderation. Please use one copy **per candidate** and attach securely to each candidate's work.
- If a candidate meets the requirements for a mark then tick the box next to that mark. You may use the numbers on the left hand side of the tick boxes to cross-reference evidence on the candidate's work.
- Indicate whole marks for each task in the box marked 'Centre' after each part. Some centres find it useful to identify the page numbers where evidence can be found next to the marking points in the mark scheme. Only whole marks can be awarded for each mark point; half marks cannot be used. Use blue or black ink only on this mark scheme, do not use red or green ink.
- Candidates must not make improvements to work once it has been marked.
- Marks must be received by OCR and the moderator **no later than 15 May 2014.**
- This document consists of **16** pages. Any blank pages are indicated.

Task Marks		Max
Task 1		20
Task 2		29
Task 3		31
Final Mark		**80**

OCR is an exempt Charity

Turn over

Instructions for Teachers
This mark scheme is a confidential document. The contents must not be disclosed to candidates until after results have been issued in August 2014. You **must not** discuss the contents of the mark scheme with anyone outside of your centre.

- Once you have seen the mark scheme for a task you **must not** give any further assistance
- Show how and where the marks have been awarded
- Use blue, black or pencil to mark (try to avoid using red or green)
- Complete one mark scheme for each candidate
- Annotate the tasks and/or mark scheme to show where/why the marks have been awarded
- Only award a mark if **all** the bullet points have been met.

- If using internal moderation, indicate the final mark.
- Transfer the marks to the front of the mark scheme.
- Check both the addition and the transcription.

Transfer the total marks out of 80 into OCR Interchange by **15 May 2014**.

OCR will request a sample of work
- Send work to moderator with CCS/160 (Centre Authentication Form) within three working days
- Each script must have an individual mark scheme
- Make sure the work is packaged in accordance with regulations:
  - No binders, no plastic wallets
  - One mark scheme for each candidate
  - A cover sheet for each separate task
  - Clearly identify different parts of the tasks
  - Name of candidate, candidate number, name of centre and centre number on each task
  - Work securely fastened together

If a centre believes that a candidate has created a correct and valid solution to a task that results in a different answer to that which is published within this mark scheme, then you are advised to contact OCR, general.qualifications@ocr.org.uk to seek further advice.

Task 1 Presentation [Total 20 marks]

1 **a** The diagram shows

1 ❏ ■ Every slide has a link to the *Title* slide
■ The *Title* and *Services* slides have a two way link
■ Every slide has a two way link to the *Help* slide
■ The *Featured Property* slides have a two way link to the *Property* slide
■ *Services*, *Staff*, *Property* and *Contact* have two way links to each other

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**1**

b(i) The master slide specification shows the

2 ❏ ■ Position of the slide title
■ Position of the navigation bar which includes logo

3 ❏ ■ Font style, colour and size for headings, normal text and buttons
■ Slide background colour

b(ii) Printed master slide evidence shows

4 ❏ ■ An area has been defined for the navigation bar
■ The logo (**Moving**) is present within the navigation bar area

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**3**

c(i) Content Requirements

■ All slides have a consistent appearance with the navigation bar and logo in the same position

■ The *Title* slide contains
○ the company name Moving On Up
○ 'Start' and 'Help' buttons

■ The *Services* slide contains
○ Details about the company's services
○ Company video (**MovingOnUp**)
○ 'Staff', 'Property', 'Contact', 'Help' and 'Reset' buttons
■ The *Staff* slide contains
○ the names and photos of the three staff
○ 'Services', 'Property', 'Contact', 'Help' and 'Reset' buttons
■ The *Property* slide contains
○ three featured property photos
○ 'Services', 'Staff', 'Contact', 'Help' and 'Reset' buttons
■ All three *Featured Property* slides contain
○ A photo of the property, its price and a brief description
○ 'Property', 'Help' and 'Reset' buttons

- The *Contact* slide contains
  - the address, telephone and website details
  - 'Services', 'Staff', 'Property', 'Help' and 'Reset' buttons
- The *Help* slide contains
  - suitable instructions
  - 'Back' and 'Reset' buttons

5-7 ❏

Tick	Marks	Requirement for marks
	3	All 8 content requirements are met
	2	Any 7 content requirements are met
	1	Any 6 content requirements are met

c(ii) Annotated evidence shows how

8 ❏ The company video is set to play automatically when the *Services* slide is viewed

9 ❏ The company name is placed at the start of the video

10 ❏ The photos of the three featured properties on the *Property* slide are animated in a timed sequence with a one second delay between each image

11 ❏ A hotspot is implemented on at least one featured property image

12 ❏ The presentation can only be navigated by clicking on a hotspot or a button

13 ❏ At least one navigation button is implemented

14 ❏ The 'Back' button on the Help slide returns to the previous slide viewed

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	10

d Each test must be for a different aspect of the presentation eg navigation buttons, animated sequence timing, image hotspots, interactive presentation mode
Note: only mark first 3 tests (**zero** marks if no table is used)

15 ❏ ■ first test has a clear **feature/action** with a clear **location** identified **and** the output action is clearly identified **and** is logically correct based upon the input

16 ❏ ■ second test has a clear **feature/action** with a clear **location** identified **and** the output action is clearly identified **and** is logically correct based upon the input

17 ❏ ■ third test has a clear **feature/action** with a clear **location** identified **and** the output action is clearly identified **and** is logically correct based upon the input

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	3

e The help sheet(s) include

Presentation
- must be a stand-alone document
- titles and subtitles have been applied
- consistent use of text styles has been applied
- appropriate screenshots that are visible and suitably cropped
- text not written as "I did …"
- no spelling errors

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**3**

Content
- how to select just the three featured property slides
- how to automate the presentation so that no user intervention is required
- how to display each slide for exactly 5 seconds
- how to loop the presentation

18-20 ❏

Tick	Marks	Requirement for marks
	3	All 6 presentation points and all 4 content points have been met
	2	Any 5 presentation points and any 3 content points have been met
	1	Any 4 presentation points and any 2 content points have been met

Task 1 TOTAL MARKS	
Centre	
Internal Mod	
Final Mark	
Max	**20**

Task 2 – Spreadsheet Model [Total 29 marks]

2   **a(i)**   Printed evidence shows
Note: Zero marks if row and column headings are missing

1 ❑   ■ The *Purchase* and *Fees* worksheets are each printed on one side of A4
   ■ The *Purchase* worksheet has the Total Purchase Cost Model on the left and the Mortgage Model on the right

2 ❑   ■ *Stamp duty* is **£0**
   ■ *Legal fee* is **£800** and VAT on the legal fee is **£160** or a combined value of **£960** may be given
   ■ *Total Purchase Cost* is **£151,510**

3 ❑   ■ *Maximum Mortgage* is **£135,000**

   a(ii)   Annotated evidence of the formulae explains how
Note – Row and Column headings must be present to allow for cross referencing of the formulae with the printed model in **a(i)**

4 ❑   ■ *Stamp Duty* is calculated correctly according to the price bands given in Table 2.2 and is calculated as a percentage of the property price
   ■ *Stamp Duty* would not be paid by first time buyers who purchase a property priced at £250,000 or less

5 ❑   ■ *Legal Fee* for Land or Commercial property are calculated as a percentage of the property price (1% and 1.5% respectively)
   ■ *Legal Fee* for Residential property is a fixed fee of £800

6 ❑   ■ *Total Purchase Cost* is calculated by adding the *Property Price*, *Stamp Duty*, *Legal Fee* (including VAT), *Search Fee* and *Recording Fee*

7 ❑   ■ *Maximum Mortgage* is calculated as the greater of either four times the highest salary or three times the joint salary
   ■ *Mortgage Required* is calculated as Total Purchase Cost minus Deposit

Annotated evidence shows how:

8 ❏ ■ A drop-down list to select the type of property purchased is implemented

9 ❏ ■ A check box to indicate whether a purchaser is a first time buyer is implemented

10 ❏ ■ A validation check is made to see if the deposit value is less than 10% of the *Property Price*
   ■ A suitably customised error message is displayed

11 ❏ ■ A green background is displayed in the *Mortgage Required* cell when *Mortgage Required < = Maximum Mortgage*
   ■ A red background is displayed in the *Mortgage Required* cell when *Mortgage Required > Maximum Mortgage*

12 ❏ ■ A print button was implemented (eg Macro or code)
   ■ The print range is customised to print just the Total Purchase Cost Model area of the *Purchase* worksheet

13 ❏ ■ Property Price, Property Category, First Time Buyer Status, Salary 1, Salary 2, and Deposit can be edited while all other cells are protected

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**13**

b Each test must be for a different formula/function
   *Note: only mark first 3 tests (**zero** marks if no table is used)*

14 ❏ ■ first test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s)

15 ❏ ■ second test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s)

16 ❏ ■ third test has a clear input **value(s)** with a clear **location(s)** identified for input **and** the output **value** is clearly identified **and** is logically correct based upon the input value(s)

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**3**

c(i) Printed evidence shows
Note: Zero marks if row and column headings are missing
Note: allow some variation in currency values in Mark Point 17 for different rounding implementations

17 ❑ ■ Regular Monthly Payment is **£839.39**
   ■ Total Monthly Payment is **£939.39**
   ■ Total Repayments is **£188,500.76**
   ■ Total interest is **£58,500.76**
   ■ Repayment period is exactly **16** years and **9** months

18 ❑ ■ The variables Mortgage Amount **£130,000**, APR **4.74%**, Term **20** and Overpayment **£100** have been entered
   ■ Values for Regular Monthly Payment, Total Monthly Payment, Total Repayments, Total Interest, Years and Months are present

c(ii) Annotated evidence of the formulae explains how
Note – Row and Column headings must be present to allow for cross referencing of the formulae with the printed model in **c(i)**

19 ❑ ■ Regular Monthly Payment is calculated
   ■ Total Monthly Payment is calculated as the Regular Monthly Payment plus Overpayment

20 ❑ ■ The last Total Monthly Payment is automatically reduced to make sure the final balance is £0.00

21 ❑ ■ Interest for any given Monthly Payment Period is calculated as the Initial Balance multiplied by the APR divided by 12 (or equivalent)
   ■ The Interest is rounded up to the nearest penny
   ■ The Balance Remaining for a Monthly Payment Period is calculated as the Initial Balance plus the Interest minus the Total Monthly Payment (or equivalent)

22 ❑ ■ Total repayment calculation correctly adds all Total Monthly Payments
   ■ Total interest calculation correctly adds all Interest payments

23 ❑ ■ The Years and Months to complete the mortgage are automatically calculated

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	7

d(i)   Printed evidence shows:
Note: Allow some minor variation in the interest saved in Mark Point 24 due to rounding/follow through

24 ❏   ■ The message reads: An overpayment of £100.00 per month will mean that you save £12,951.05 in interest and repay the loan 3 years and 3 months early
      ■ Currency values are formatted correctly to two decimal places

25 ❏   ■ The graph is printed on one side of A4
      ■ The X axis is labelled Payment Period
      ■ The Y axis is labelled Mortgage Balance
      ■ A line for regular payments is present and identifiable and has a value of £0.00 in payment period 240
      ■ A line for overpayments is present and identifiable and has a value of £0.00 in payment period 201

d(ii) Annotated evidence explains how
26 ❏   ■ The data for two sets of monthly payments (Regular Monthly Payment and Overpayment) are calculated and used within the graph eg expansion of the model, macros or code

27 ❏   ■ The interest to be saved from making regular overpayments is automatically calculated correctly

28 ❏   ■ The time period in years and months that would be saved is automatically calculated correctly

29 ❏   ■ The message is inserted automatically into the graph

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	6

Task 2 TOTAL MARKS	
Centre	
Internal Mod	
Final Mark	
Max	29

Task 3 – Database [Total 31 marks]

3   **a(i)**   Hand drawn evidence shows*:*
Note: No marks if not hand drawn (scanned hand drawn design is acceptable)
Note: Allow appropriate variation in entity names

1 ❑ ■ AGENT to VIEWING is 1:M
      ■ PROPERTY to VIEWING is 1:M
      ■ BUYER to VIEWING is 1:M

a(ii) Evidence shows:
2 ❑ ■ Number of bedrooms and Number of bathrooms are Integers
      ■ Valuation is Currency
      ■ Central Heating and Garden are Boolean (Yes/No)
      ■ Date of Valuation is Date

3 ❑ ■ Postcode field length is 10 or fewer characters
      ■ Type of property is 15 or fewer characters

4 ❑ ■ At least three different types of validation check are given eg Lookup check for Property Type, Range check for Number of bedrooms (> 0), Presence check for Address, Picture / Format check for Postcode
      ■ The validation checks given are sensible

b   Printed evidence shows
5 ❑ ■ There are exactly three AGENT records for Mrs Karen Brown, Mr Jack Pott and Mr Chris Smith

6 ❑ ■ There are 5 BUYER records
      ■ There are 12 PROPERTY records
      ■ There are 5 VIEWING records

c(i) Printed evidence shows
7 ❑ ■ A title of 'Moving On Up – Property Screen'
      ■ Fields for the address, postcode, valuation, date of valuation, property type, number of bedrooms, number of bathrooms, central heating, garden and an image of the property are present
      ■ The total number of viewings arranged/No viewings is present

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	4

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	2

c(ii) Annotated evidence explains how

8 ❏ ■ Scroll bars, record selectors and default navigation buttons are removed

9 ❏ ■ How customised buttons are added to the form

10 ❏ ■ How the date of the most recent viewing is calculated
 ■ How the date is displayed only if the property has had a viewing

11 ❏ ■ How the total number of viewings that have been arranged for the property is calculated

12 ❏ ■ How the message 'No Viewings' is displayed if no viewings have been arranged

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**6**

d(i) Printed evidence shows:

13 ❏ ■ The title is 'Moving On Up – Search Screen'
 ■ There is space to enter the parameters minimum price, maximum price, property type (drop-down selection), minimum number of bedrooms, central heating and garden
 ■ There is an indicator or value displayed for the current number of matches
 ■ A button for 'View Matches'

d(ii) Evidence shows

14 ❏ ■ The search parameters given will match exactly four properties
 ■ Properties that meet the search parameters have been identified

d(iii) Printed evidence shows

15 ❏ ■ The title is 'Property Report'
 ■ The properties are sorted in descending order of price
 ■ There are four properties in the report
 ■ Each property is clearly identifiable

d(iv) Annotated evidence explains how

16 ❏ ■ a validation check is implemented (eg range check, minimum price >= 0)
 ■ the validation rule is tested

17 ❏ ■ the price range is matched between the minimum and maximum prices
 ■ the minimum number of bedrooms is matched
 ■ garden is matched
 ■ central heating is matched

18 ❏ ■ the 'any' property status is managed correctly within the search

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**7**

19 ❏ ■ the number of properties that match the search criteria is calculated and dynamically displayed on the screen as the search parameters are changed

e   Printed evidence shows

20 ❏   ■ The title is 'Moving On Up – Booking Screen'
    ■ The date and timeslot (drop-down list) can be entered
    ■ The agent, property and buyer can be entered
    ■ A 'Process Booking' button is present

Annotated evidence explains how

21 ❏   ■ the Booking Screen displays no values for the data entry parameters when it is loaded

	Tick	Marks	Requirement for marks
22-23 ❏		2	**all** potential combinations of an agent/ property/buyer for the same date and time slot would be prevented Relevant queries/calculations have been explained
		1	**at least one** aspect of a potential double booking has been prevented and explained eg double booking an agent for the selected date and time slot Relevant queries/calculations have been explained

24 ❏   ■ when the Process Booking button is clicked a valid booking is confirmed via a customised confirmation message

25 ❏   ■ The VIEWING table is automatically updated with the contents of the booking if it is successful (eg an action query to append the booking screen data to the VIEWING table)

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	6

f   Printed evidence shows

26 ❏   ■ A Main Menu Screen has been created with buttons to link to the Property Screen, Search Screen and Booking Screen
    ■ The Property Screen, Search Screen and Booking Screen each have a button linking them back to the Main Menu Screen

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	1

g   A printed user guide contains evidence of:
Presentation requirements
    ■ the user guide is a standalone document
    ■ title page / front cover
    ■ contents page with page numbers
    ■ correct page numbers on user guide pages
    ■ consistent style throughout for sub-headings and text
    ■ appropriate screenshots that are visible and suitably cropped
    ■ two from
        ○ troubleshooting guide (at least two problems discussed)
        ○ glossary of terms (at least six terms)
        ○ index
    ■ no spelling errors

27-29 ❑

Tick	Marks	Requirement for marks
	3	All 8 presentation requirements are present
	2	Any 7 presentation requirements are met
	1	Any 6 presentation requirements are met

Content requirements
■ Description of how to load the system
■ Description of how to navigate between the system components
■ Description of how to view the property details
■ Description of how to perform searches for potential buyer
■ Description of how to book a viewing for a buyer

MARKS:	
Centre	
Internal Mod	
Final Mark	
Max	**5**

30-31 ❑

Tick	Marks	Requirement for marks
	2	All 5 content requirements are met
	1	Any 4 content requirements are met

Task 3 TOTAL MARKS	
Centre	
Internal Mod	
Final Mark	
Max	**31**

14

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