



Cambridge IGCSE™

INFORMATION AND COMMUNICATION TECHNOLOGY

0417/22

Paper 2 Document Production, Databases and Presentations

May/June 2023

MARK SCHEME

Maximum Mark: 70

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the May/June 2023 series for most Cambridge IGCSE, Cambridge International A and AS Level and Cambridge Pre-U components, and some Cambridge O Level components.

This document consists of **17** printed pages.

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Task 2 – Word Processing

Question	Answer	Marks
1	File saved as VCYCLING with evidence of file type	1
2		3
	Report by: [space] entered accurately in header	1
	Name, centre number, candidate number entered after <i>Report by</i> : right aligned, no other items	1
	Automated page numbers right aligned in footer, no other items	1
3		2
	Section break – applied to correct text	1
	2 columns, 2 cm column spacing	1
4		2
	VC-subhead style created, named correctly, based on normal/default	1
	VC-subhead – serif 16 pt, centred, bold, italic, single line, 0 pt before, 8 pt after	1
5	VC-subhead applied consistently to all 4 subheads, matches style defined in EV 2	1
6	Complete paragraph moved, now under subheading <i>Benefits</i> with spacing maintained	1
7	Correct image inserted in correct paragraph	1
8	Image rotated 180°	1
9		2
	Image resized to 4 cm wide with aspect ratio maintained	1
	Image aligned to top of text and right margin with text wrapped	1
10		2
	Table – row 1 of table merged and centred	1
	Table – row 1 of table grey shading applied	1
11	Sorted descending order of <i>Download Growth</i> , integrity maintained	1
12		2
	Table complete and intact, new row inserted as last row of table	1
	Text entered accurately in new row	1

Question	Answer	Marks
13		3
	Table – VC-table style applied rows 2 to 8 only	1
	3–4pt external border only, no internal gridlines printed	1
	Table borders and all data fit within column width, all data on one line, 8pt below table	1
14	Document spell checked and proofread – layout complete and paragraphs intact	1

Task 3 – Database

Question	Answer	Marks
15		2
	<i>Race</i> table – 10 field names as given, correct data types, primary key <i>Bib_No</i>	1
	<i>Results</i> table – <i>Race_No</i> field set as primary key	1
16	<i>Clubs</i> table – 6 field names as given, correct data types, primary key <i>Club_ID</i>	1
17	1-to-Many relationship 1- <i>Club_ID</i> (<i>clubs</i> table) and <i>Club_Code</i> (<i>race</i> table)	1
18		3
	Columnar form, all 10 fields from <i>race</i> table	1
	1 different formatting feature	1
	1 different formatting feature max 2 from: Appropriate title Meaningful field labels Appropriate field lengths to match data Font style/size/colour change	1
19		2
	New record accurate – RCC11 Burns Amy 1208 1943 0.678 02:20:05 Grand Veteran 80 to 89 Female	1
	New record <i>1208</i> <i>Female</i> inserted only once, record <i>1010</i> still present	1

Question	Answer	Marks
20		6
	Report title Master and Junior Outcomes 100% accurate, larger font, fully visible, top of page	1
	Select records – <i>Area</i> ends with the text land	1
	Select records – <i>Category</i> is Junior or Master	1
	Sort ascending order of <i>Category</i>	1
	Correct fields (7), correct order, headings match data – First_Name Last_Name Gender Category Area Country Race_Time	1
	Printed in portrait, fits a single page, all fields present, no truncation	1
21		14
	Report footer – Name, centre number, candidate number in footer, appears on every page	1
	Report title GBR Category Results – 100% accurate, larger font, fully visible	1
	Calculated field – field heading LPF_Uplift – 100% accurate	1
	Calculated field – uplift calculated – correct values	1
	Calculated field – <i>LPF_Uplift</i> values display in the format hh:mm:ss	1
	Select records – <i>Country_Code</i> is GBR	1
	Select records – <i>YOB</i> is <=1960	1
	Records sorted on 2 fields – ascending on <i>Country</i> and descending order of <i>LPF_Ratio</i>	1
	Correct 8 base fields in correct order Bib_No Gender YOB Category LPF_Ratio Club_Name Country Race_Time (LPF_Uplift)	1
	Landscape, single page wide, all base fields present, no truncation	1
	Calculation – correct longest race time (03:07:42)	1
	Calculation – end of report only, fully visible, right aligned with times in <i>Race_Time</i> column	1
	Calculation – label Longest race time – 100% accurate, fully visible to the left of value	1
	Screenshot evidence of database formula to calculate the max race time	1

Task 4 – Presentation

Question	Answer	Marks
22	Slides imported (6), consistent title/bullet layout, no blank slides, no text changed	1
23		2
	Header – automated slide numbers top left, same position on every slide, no overlap	1
	Footer – name, centre number, candidate number bottom left, same position on every slide, no overlap	1
24		2
	Vertical bar chart created using correct data	1
	App labels on category axis, no legend displayed	1
25		2
	Chart title Top Fitness App Downloads 2022 – 100% accurate	1
	Accurate value axis title Million	1
26	Data values only displayed along the top of each bar	1
27		2
	Value axis (y-axis) displays minimum 0, maximum 15	1
	Value axis (y-axis) increments set at 3	1
28	Chart on correct slide, left of bullets, chart data fully visible, no overlap/split words	1
29		4
	Square shaped action button inserted top right of correct slide	1
	Text on action button Top Fitness Trends – 100% accurate and fits within button	1
	Evidence of Action button linked	1
	... action button linked to open correct file j2322trends.rtf	1
30	Evidence of slide show set so all slides loop continuously on-screen	1
31		2
	Slide <i>Virtual Cycling Trends</i> (3) printed as full page single slide in landscape	1
	All slides printed as handouts, portrait orientation with 3 slides to page	1

Report by: name, centre number, candidate number

Text **Report by:**[space] entered accurately 1 mark
Name, centre number, candidate number right aligned, no other items 1 mark

Virtual Cycling

Virtual cycling is a growing fitness trend which is proving to be the best development in cycling for many years. It has created a new way in which people can enjoy the sport. Participation has nearly tripled since 2019. Much of this interest has been driven by technology which allows cyclists to train and compete from the comfort of their home. In recent surveys, virtual cycling ranked in the top 6 worldwide fitness trends.

Columns

Section break – applied to correct text 1 mark
2 columns, 2 cm column spacing 1 mark

Benefits

Cycling is an excellent form of exercise and a highly effective way to burn fat, improve fitness and tone muscle. Virtual cycling enables nervous and inexperienced cyclists to participate in simulated races in large groups without fear of accidents. They will also not have to deal with the potentially intimidating experience of traveling to an outdoor event and negotiating the start of a mass participation event.

Another major benefit is safety. When riding indoors on a stationary bike there is no traffic, no roads or weather to contend with. Riders are often able to train in a controlled environment, such as a gym or a dedicated indoor cycling studio.

Complete paragraph moved to correct location with spacing maintained 1 mark

For competing athletes this technology can replace the need to travel to different locations to compete at major competitions. This saves travelling time and costs. Coaching staff can assist athletes remotely regardless of their location and the time zones involved. This greater flexibility means athletes can train and compete in a greater variety of settings than would otherwise be possible.

Drawbacks

There is a danger that some cyclists may push themselves beyond their own safe physical limits and experience an adverse

Subheadings (4)

VC-subhead matches style defined in EV2, applied consistently to all 1 mark

adequate air flow for cooling. These are all potential dangers of cycling at home without supervision or support. Data security is another issue as app users provide large amounts of data which are at risk from hacking.

Cheating has become an issue in virtual cycling races as prize money has increased the incentive to do well. During competitions online platforms log the data from riders via power meters. Some competitors have edited their power data logs to show a substantial



Image

Image inserted in correct paragraph 1 mark
Image rotated 180° 1 mark
Aligned to top of text, right of column, text wrapped 1 mark
Resized to 4 cm wide, aspect ratio maintained 1 mark

Equipment

Online training platforms monitor power, speed, pace and heart rate using sensors on a bicycle set up as a static trainer. A smart phone, tablet, computer or Smart TV are required to run the player, along with a monthly subscription to a training app. The

Footer

Automated page number right aligned, no other items 1 mark

Report by: name, centre number, candidate number

Table

- Table complete and intact, new row inserted as last row of table 1 mark
- Text entered accurately in new row **Americas | 7% | 19%** 1 mark
- Table sorted, descending order *Download Growth*, integrity maintained 1 mark
- Row 1 merged and centred 1 mark
- Row 1 grey shading applied 1 mark
- Borders & data fit within column width, text on one line, 8 pt below table 1 mark
- 3–4 pt external border only, no internal gridlines printed 1 mark

Successful performance is often rewarded with points or currency that can be used to make purchases such as bike frames. Common video game features such as power-up items to improve performance for a short period are also available. The number of app downloads and daily usage has increased significantly in recent years. The largest growth of downloads and daily usage has been seen in India.

Smart turbo trainers use Bluetooth technology to interact with a virtual cycling sports app. The top trainers are direct-drive which involves removing the rear wheel of a standard bicycle and attaching the bicycle chain directly to the trainer. These offer a more realistic feel and are capable of simulating conditions such as hill climbs, drafting and changes in the road surface. They also record a wealth of performance data. Some virtual training platforms utilise wearable technology such as virtual reality (VR) headsets. These fully immerse the user in the virtual environment.

Virtual Cycling Apps

Virtual cycling applications have become very popular. They enable cyclists to connect and ride together through virtual worlds. The gaming nature of the app has the ability to motivate users and distract them from the boredom and suffering of a hard indoor workout. This can result in more prolonged or intense workouts. Nothing can beat cycling outside in a social environment surrounded by nature and the elements. It is an invigorating and healthy experience and has many physical, mental and social benefits. It can have a calming effect and alleviate feelings of depression and anxiety. Virtual cycling is set to complement outdoor cycling but not replace it. Time on a turbo trainer paired with a gaming experience is an ideal alternative when time is limited or the weather prevents riding outside.

Global Cycle App Growth		
Region	Daily Usage	Download Growth
India	72%	137%
Middle East and North Africa	26%	52%
Asia Pacific	23%	45%
Rest of the World	22%	40%
Europe	10%	23%
Americas	7%	19%

Data is collected from the trainer and processed by the app. The effort the rider puts in is measured and the resistance is adjusted to simulate cycling in the real world. The rider controls an avatar whilst watching the game running on a computer screen. They must pedal hard to make their avatar move faster to beat the competition. New routes and training environments are being developed continuously.

Document Presentation

Document complete/paragraphs intact, landscape, pages and columns aligned top, consistent margins, no widows/orphans, table not split, no blank pages, pre-applied styles unchanged with consistent spacing, space below columns less than 6 pt 1 mark

Task 3 – Database

Title

Title 100% accurate, larger font, fully visible 1 mark

Master and Junior Outcomes

First_Name	Last_Name	Gender	Category	Area	Country	Race_Time
Jolande	Gustafsson	Female	Junior	Halland	Sweden	02:10:47
Ludvig	Germundson	Male	Junior	Halland	Sweden	02:19:39
Mattheo	Wieser	Male	Junior	Burgenland	Austria	01:57:06
Lawrence	Inglis	Male	Junior	Queensland	Australia	01:49:55
Remington	Knowles	Male	Junior	Auckland	New Zealand	02:03:48
Natascha	Schneider	Female	Junior	Burgenland	Austria	02:13:12
Haakon	Cruickshank	Male	Junior	Jutland	Denmark	01:45:05
Arpad	Kluge	Male	Junior	Newfoundland	Canada	02:13:27
Ayden	Bredenberg	Male	Master	Jutland	Denmark	03:01:51
Cornelius	Jepperson	Male	Master	Jutland	Denmark	03:11:36
Philippe	Sadesky	Male	Master	Jutland	Denmark	01:52:26
Margareta	Anderberg	Female	Master	Halland	Sweden	02:31:57
Melker	Van Jaarsveldt	Male	Master	Halland	Sweden	01:34:30
Bjorn	Amundsen	Male	Master	Jutland	Denmark	02:09:37
Dante	Carlstrom	Male	Master	Halland	Sweden	01:48:56
Bastiaan	Vandenberg	Male	Master	Queensland	Australia	02:48:51
Agneta	Beckstrand	Female	Master	Halland	Sweden	01:05:31
Jenaya	Christoferson	Female	Master	Halland	Sweden	01:44:18
Larry	Armstrong	Male	Master	Burgenland	Austria	02:05:34
Miguel	Croken	Male	Master	Newfoundland	Canada	01:15:38
Katharina	Schneider	Female	Master	Burgenland	Austria	01:44:04
Magdalena	Flaming-Grabner	Female	Master	Burgenland	Austria	02:52:52
Alexina	Mislan	Female	Master	Auckland	New Zealand	01:41:49
Maverick	Stallard	Male	Master	Auckland	New Zealand	03:14:24
Elias	Bergman	Male	Master	Auckland	New Zealand	01:34:16
Jett	Anderson	Male	Master	Auckland	New Zealand	01:36:02
Sarah	Brereton	Female	Master	Auckland	New Zealand	02:18:25
Colby	Barraclough	Male	Master	Newfoundland	Canada	01:26:51
Sandra	Bunnin	Female	Master	Newfoundland	Canada	02:23:24
Jill	Campbell	Female	Master	Newfoundland	Canada	02:24:43
Joshua	Barnes	Male	Master	Newfoundland	Canada	02:05:42
Johannes	Baumgartner	Male	Master	Burgenland	Austria	02:33:36

Select records (32):Area ends with the text **land** 1 markCategory is **Junior** or **Master** 1 markSort ascending on *Category*

1 mark

Specified fields, correct order, headings match the data

1 mark

Portrait, fits a single page, all fields present, no truncation

1 mark

Name, centre number, candidate number

Title
 Title 100% accurate, larger font, fully visible 1 mark

Calculated field
 Heading 100% accurate 1 mark
 Uplift calculated - correct values 1 mark
 Displays in the format hh:mm:ss 1 mark

GBR Category Results

Bib_No	Gender	YOB	Category	LPF_Ratio	Club_Name	Country	Race_Time	LPF_Uplift
1168	Male	1960	Master	0.908	Easy Riders	England	01:58:21	01:47:28
1239	Male	1960	Master	0.908	Tubular Belles	England	02:27:40	02:14:05
1255	Male	1950	Veteran	0.843	Easy Riders	England	03:07:42	02:38:14
1176	Female	1960	Master	0.787	Tubular Belles	England	02:17:28	01:48:11
1055	Female	1958	Master	0.778	Easy Riders	England	02:17:47	01:47:12
1116	Male	1932	Super Veteran	0.622	Easy Riders	England	01:14:44	00:46:29
1013	Female	1934	Grand Veteran	0.576	Tubular Belles	England	01:03:40	00:36:40
1123	Female	1960	Master	0.908	Team Shamrock Spinners	Northern Ireland	02:26:37	02:13:08
1106	Male	1957	Master	0.891	Team Shamrock Spinners	Northern Ireland	01:55:27	01:42:52
1227	Male	1957	Master	0.891	Team Shamrock Spinners	Northern Ireland	01:26:07	01:16:44
1158	Male	1944	Veteran	0.788	Team Shamrock Spinners	Northern Ireland	01:12:47	00:57:21
1137	Male	1941	Grand Veteran	0.755	Team Shamrock Spinners	Northern Ireland	01:51:01	01:23:49
1249	Female	1933	Super Veteran	0.562	Team Shamrock Spinners	Northern Ireland	02:42:01	01:31:03
1267	Male	1954	Master	0.872	VeloSterling Procycles	Scotland	03:06:46	02:42:52
1081	Male	1953	Veteran	0.866	VeloSterling Procycles	Scotland	01:32:06	01:19:46
1195	Male	1953	Veteran	0.866	VeloSterling Procycles	Scotland	01:52:24	01:37:20
1162	Male	1953	Veteran	0.866	VeloSterling Procycles	Scotland	02:50:50	02:27:57
1089	Male	1950	Veteran	0.843	VeloSterling Procycles	Scotland	02:34:12	02:09:59
1272	Male	1947	Veteran	0.818	VeloSterling Procycles	Scotland	02:21:01	01:55:21

LPF_Ratio stored and displayed to 3 decimal places 1 mark
 Sort ascending on *Country* and descending order of *LPF_Ratio* 1 mark
 Specified base fields (8), all fields correct order, headings match data 1 mark
 Landscape, single page wide, all base fields present, no truncation 1 mark
 Name, centre number, candidate number in footer, appears on every page 1 mark

Select records (42):
Country_Code is **GBR** 1 mark
YOB is **<=1960** 1 mark

Name, centre number, candidate number

New record **1208** inserted only once, record **1010** still present 1 mark

B	Name	Country	Race_Time	LPF_Uplift
1226	M Veteran	Scotland	01:55:37	01:34:34
1315	Veteran	Scotland	01:18:14	01:04:00
1180	Veteran	Scotland	02:01:08	01:37:53
1166	1943 Grand Veteran	Scotland	02:27:36	01:54:50
1014	1954 Master	Scotland	01:49:00	01:22:31
1082	M 1937 Grand Veteran	Scotland	01:05:12	00:45:46
1077	Female 1944 Veteran	Scotland	01:49:50	01:15:27
1208	Female 1943 Grand Veteran	Scotland	02:20:05	01:34:59
1010	Female 1943 Grand Veteran	Scotland	01:52:01	01:15:57
1290	Male 1935 Grand Veteran	Scotland	02:53:17	01:56:37
1080	Female 1935 Grand Veteran	Scotland	01:44:32	01:01:40
1279	Male 1930 Super Veteran	Scotland	02:34:02	01:29:48
1177	Female 1931 Super Veteran	Scotland	01:35:15	00:50:35
1108	Male 1960 Master	Wales	02:47:44	02:32:18
1167	Male 1955 Master	Wales	02:04:54	01:49:47
1164	Male 1953 Veteran	Wales	03:00:50	02:36:36
1132	Male 1948 Veteran	Wales	02:37:43	02:10:26
1250	Male 1942 Grand Veteran	Wales	01:44:57	01:20:24
1224	Male 1938 Grand Veteran	Wales	02:57:30	02:07:16
1228	Female 1946 Veteran	Wales	01:27:04	01:01:18
1285	Male 1937 Grand Veteran	Wales	02:25:44	01:42:18
1234	Male 1932 Super Veteran	Wales	02:44:24	01:42:15
1238	Male 1930 Super Veteran	Wales	01:20:15	00:46:47
			Longest race time	03:07:42

Correct longest race time (03:07:42) 1 mark
 End of report only, fully visible, right aligned with times in *Race_Time* column 1 mark
 Label 100% accurate, fully visible to the left of value 1 mark

Name, centre number, candidate number

Task 4 – Presentation

Slides imported (6), consistent title/bullet layout, no blank slides, no text changed	1 mark
Header - slide number in header, top left, same position on every slide, no overlap	1 mark
Footer - name, centre number, candidate number bottom left, same position on every slide, no overlap	1 mark

The Virtual World of Cycling

- A growing trend

Benefits of Virtual Cycling

- complete control over training
- utilizes detailed metrics and performance tracking data
- diverse environment makes indoor cycling exciting and fun
- social interaction with like-minded people worldwide
- safe as no danger from traffic
- available in any location, at any time regardless of the weather

Virtual Cycling Trends

- online training became the top fitness trend in 2022
- Zwift topped the health and fitness app charts with 9.9 million downloads - an increase in global downloads of 40%
- 1.1 million smart trainers sold - an average of one sold every six seconds

28/07/2021

Velotopia Cycling App

- fastest growing interactive cycling at home app
- most popular virtual cycling platform for amateur and elite cyclists
- cater for all abilities and fitness levels
- highly engaged cycling community which brings the virtual environment to life
- many cycle routes and virtual worlds to explore
- users can tackle mixed terrain from flat circuits to mountain climbs and smooth terrain to gravel roads and cobble

Equipment

- bike or dedicated indoor smart bike
- classic turbo trainer (R30) – clamps to the wheel and allows pedalling whilst stationary
- speed sensor with Bluetooth for use with classic trainer for limited functionality
- smart turbo trainer (J1000) – connects with cycling apps, simulates hill climbs and records detailed ride analytics
- smartphone, computer, tablet or smart TV with Bluetooth
- cycling app – monthly subscription

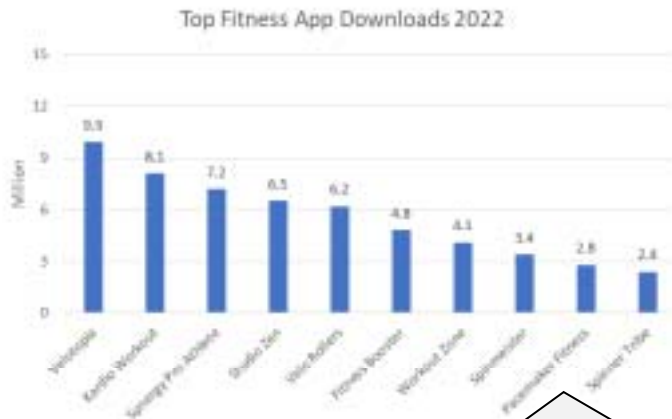
Getting Started

- connect your bike to the turbo trainer
- download the Velotopia cycling app - start with a free 7-day trial and ride
- pair the app to your smartphone, computer, tablet or smart TV
- create an account and choose an avatar
- start pedalling and join the fun!

All slides printed as handouts, portrait orientation, 3 slides to page 1 mark

Square shaped action button inserted top right of *Virtual Cycling Trends* slide 1 mark
 Text inserted on action button – 100% accurate and fits within button 1 mark

Virtual Cycling Trends



- online training became the top fitness trend in 2022
- Velotopia topped the health and fitness app charts with 9.9 million downloads - an increase in global downloads of 46%
- 3.1 million smart trainers sold - an average of one sold every ten seconds


Name, centre number, can

Vertical bar chart created using correct data 1 mark
 App labels on category axis, millions on value axis, no legend displayed 1 mark
 Chart title **Top Fitness App Downloads 2022** – 100% accurate 1 mark
 Accurate value axis title *Million* 1 mark
 Data values only displayed along the top of each bar 1 mark
 Value axis (y-axis) displays minimum 0, maximum 15 1 mark
 Value axis (y-axis) increments set at 3 1 mark
 Correct slide, left of bullets, chart data fully visible, no split words, chart does not overlap any slide items 1 mark
 Slide *Virtual Cycling Trends* printed, full page single slide, landscape 1 mark

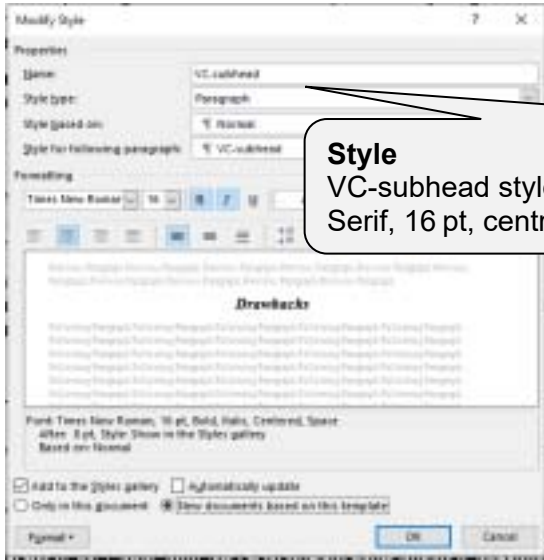
EVIDENCE DOCUMENT

Step 1 – **EVIDENCE 1**

File saved as VCYCLING with evidence of correct file type 1 mark

 VCYCLING.docx	27/07/2021 15:48	Microsoft Word Document	20 KB
-------------------------------------------------------------------------------------------------	------------------	-------------------------	-------

Step 4 – **EVIDENCE 2**



Style
 VC-subhead style created, named correctly, based on normal/default 1 mark
 Serif, 16 pt, centred, bold, italic, single line, 0 pt before, 8 pt after 1 mark

Step 15 – **EVIDENCE 3**

Field Name	Data Type
Club_Code	Short Text
Last_Name	Short Text
First_Name	Short Text
Bib_No	Number
YOB	Number
LPF_Ratio	Number
Race_Time	Date/Time
Category	Short Text
Year_Band	Short Text
Gender	Short Text

DB Structure – race table
 All field names and data types as given, primary key *Bib_No* 1 mark

Step 16 – **EVIDENCE 4**

Field Name	Data Type
Club_Name	Short Text
Club_ID	Short Text
Area	Short Text
Country	Short Text
Contact	Short Text
Country_Code	Short Text

DB Structure – clubs table
 All field names and data types as given, primary key *Club_ID* 1 mark

Step 17 – EVIDENCE 5

1-to-Many relationship *Club_ID* (clubs) and *Club_Code* (race) 1 mark

Steps 18 and 19 – EVIDENCE 6

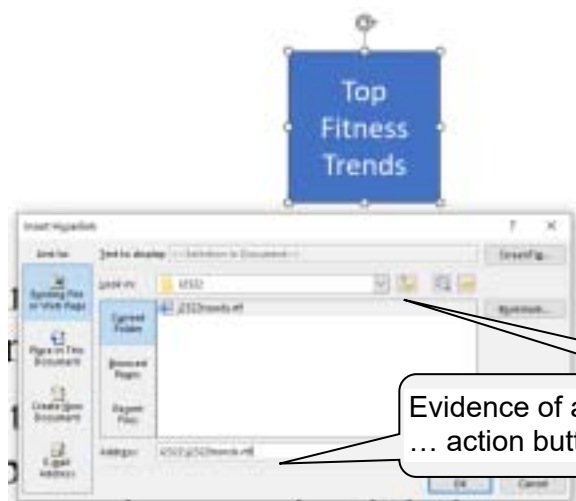
Columnar form, all fields from race table 1 mark
 Two different formatting features to improve design: 2 marks
 max 2 from:
 Appropriate title
 Meaningful field labels
 Appropriate field lengths to match data
 Labels font style/size/colour change
 New record entered accurately in the form 1 mark

Step 21 – EVIDENCE 7

Database formula to calculate the longest race time 1 mark

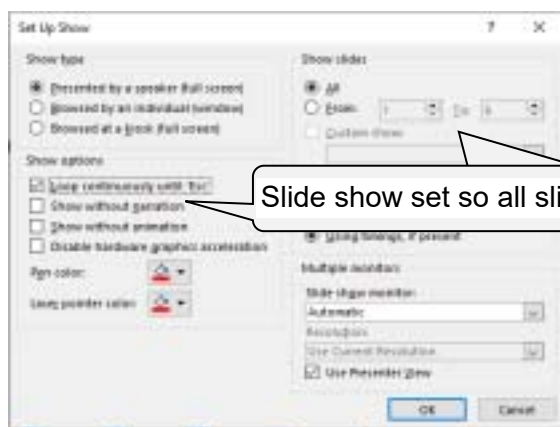
```
=Max([Race_Time])
```


Step 29 – EVIDENCE 8



Evidence of action button linked 1 mark
... action button linked to open correct file j2322trends.rtf 1 mark

Step 30 – EVIDENCE 9



Slide show set so all slides loop continuously on-screen 1 mark