

6-A-Day – Computer Science GCSE (41)

Q1	<ul style="list-style-type: none"> • data structure does not depend on the application / no data dependence • Multiple platforms/ applications • ... can operate on the same data • ... ensures no redundancy/inconsistency (between applications) • Different views of the same data • ... can easily be prepared for different users according to their need. • Any application can be changed if needed • ... without changing the data structure / reduces unproductive maintenance 	<p>3</p> <p>Do not accept answers that refer to protecting the data from being accidentally deleted / different levels of PERMISSIONS for different users / data integrity</p> <p>But DO accept answers that refer to different users viewing different/user appropriate data (bullet 4)</p>										
Q2 Q3	<p>Queries eg</p> <ul style="list-style-type: none"> • Select attendance for all students of a particular tutor group each week • ... so the tutor can see who has missed lessons • Select weekly attendance of a particular student for a term • So the school can see if his/her attendance is improving • (1 mark for a correct point + 1 mark for expansion) <p>Validation rules eg</p> <ul style="list-style-type: none"> • Range check / only allow a range of marks (e.g. Present, Absent, Late) • When teachers are calling the register and inputting the marks • Presence check on required fields(such as name, class etc.) • When a pupil is added to the register • (1 mark for a correct point + 1 mark for expansion) 	<p>4</p> <p>Do not accept answers which explain what is meant by a query or validation rule. The question requires candidates to explain one example of how they can be used in this application, not what they are. Award one mark for a correct example and an expansion mark for detail/justification of this use.</p> <p>Remember to award a mark out of 4 for both parts of the question.</p>										
Q4	<p>e.g.</p> <ul style="list-style-type: none"> • Input device: <u>touch</u> screen / microphone / accelerometer/(hardware) button/ camera / (hard) keyboard • Output device: screen / speaker / vibrating device / LEDs • Storage device: Solid state memory e.g. SD card, memory card, flash memory , SIM card 	<p>3</p> <p><i>Accept any devices that can be built-in to a mobile phone.</i></p> <p>Do not accept devices which send or receive binary data as input or output devices (such as those involved with Bluetooth, Wi-Fi, GPS).</p> <p>For output accept display Do not accept headphones as they are not built-in. Do not accept Hard Disk/Hard drive as a storage device.</p>										
Q5	<table border="1"> <thead> <tr> <th>Content</th> <th>Type of file</th> </tr> </thead> <tbody> <tr> <td>An image showing a map of the school.</td> <td>JPG</td> </tr> <tr> <td>A text document containing information to parents about the school rules.</td> <td>PDF</td> </tr> <tr> <td>A high resolution picture of all the staff and pupils.</td> <td>JPG</td> </tr> <tr> <td>A short video clip of some pupils saying why they like the school.</td> <td>MPEG</td> </tr> </tbody> </table> <p>1 mark per row</p>	Content	Type of file	An image showing a map of the school.	JPG	A text document containing information to parents about the school rules.	PDF	A high resolution picture of all the staff and pupils.	JPG	A short video clip of some pupils saying why they like the school.	MPEG	<p>4</p>
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Q6	<ul style="list-style-type: none"> • When the file is compressed some detail/data/quality/resolution is lost... • ... which is <u>not noticeable</u> in the video file/<u>video still viewable</u> with lower quality • ... but would make the text file unreadable/lose meaning or comprehension 	<p>3</p> <p><i>The first bullet is for the idea that something is lost in the compression process. The second bullet is for the idea that the video file is still usable with this loss. The third bullet is for the idea that the text file is not usable.</i></p>										