



Activity type	classroom <input checked="" type="checkbox"/> homework <input type="checkbox"/> independent learning <input type="checkbox"/> other <input type="checkbox"/>																								
Activity objectives(s)	<p>Understand the concept of parallel arrays</p> <p>Know how to use the counting occurrences algorithm</p>																								
Activity resources(s)	Programming language																								
Delivery mode	teacher led <input checked="" type="checkbox"/> student led <input type="checkbox"/>	Collaboration type	individual <input type="checkbox"/> pairs <input type="checkbox"/> groups <input type="checkbox"/>																						
Task description	<p>A 1000M race heat records the following results</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Time</th> </tr> </thead> <tbody> <tr><td>Fred</td><td>3.10</td></tr> <tr><td>Jim</td><td>2.12</td></tr> <tr><td>Andy</td><td>2.59</td></tr> <tr><td>Joe</td><td>3.12</td></tr> <tr><td>Pete</td><td>2.19</td></tr> <tr><td>Alex</td><td>2.48</td></tr> <tr><td>Paul</td><td>3.02</td></tr> <tr><td>Jack</td><td>2.48</td></tr> <tr><td>Ken</td><td>2.34</td></tr> <tr><td>Luke</td><td>3.46</td></tr> </tbody> </table> <p>Qualifiers must get a time less than 3 minutes. The organisers want to be able to store this data and to find out how many qualifiers there are</p> <p>The application should ask for 10 names and scores, then should output the results in a table together with a statement of how many people have qualified for the final</p> <p>You will need to create 3 arrays to store the data (STRING, REAL and BOOLEAN)</p>			Name	Time	Fred	3.10	Jim	2.12	Andy	2.59	Joe	3.12	Pete	2.19	Alex	2.48	Paul	3.02	Jack	2.48	Ken	2.34	Luke	3.46
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SCHOLAR Lesson Outline

Differentiation (Alternative use)	This task might be used with National 5 as well as Higher.
Hints & Tips	<p>If you want you may wish to supply students with the following pseudocode.</p> <pre>FOR Counter FROM 0 TO 9 DO SEND names[counter] & times[counter] & qualifiers[counter] TO DISPLAY END FOR FOR Counter FROM 0 TO 9 DO IF Times [Counter] < 3.00 THEN SET qualifiers [Counter] TO TRUE END IF END FOR SET numberFound TO 0 FOR Counter FROM 0 TO 9 DO IF qualifiers [Counter] = TRUE THEN SET numberFound TO numberFound + 1 END IF END FOR SEND ["There were " & numberFound & "qualifiers."] TO DISPLAY</pre> <p>If parameters have already been introduced then students should be encouraged to use the arrays as formal parameters in these procedure definitions</p> <p>An extension exercise could be to ask students to store the information as an array of records.</p>
Notes	<p>SCHOLAR Topics</p> <p>Unit 1 Topic 6.5, Topic 3.5</p>