Specific marking instructions

Task 1 — software design and development

Task	Expected response	Max mark	Additional guidance
1a	♦ Inputs (both required) – duration of training session – duration of each song ♦ Process (any 3 required) – add up the duration of all songs – compare total to the duration of training session (is greater than or equal to) – select a random song – calculate the length of the training session to seconds – validate length of training session	**2**	
1b	♦ running total within loop ♦ loop terminating when total length of songs is greater or equal to than training session duration ♦ output message (enough songs have been entered)	**3**	Make sure the condition matches the type of loop (pre or post conditional). If candidate fails to indicate a loop only the 3rd bullet can be awarded.
1c	♦ 3, 2:300, 3:400 ♦ foam message in correct place	**2**	Correct order: ♦ Number of songs 3 ♦ 2: 300 ♦ foam message ♦ 3:400

Task	Expected response	Max mark	Additional guidance
1d	**Step 2** (3 marks) ♦ conditional loop with correct condition ♦ input of training session duration within loop ♦ error message displayed inside loop **Step 3** (1 mark) ♦ calculate and store training session duration in seconds **Step 4** (5 marks) ♦ Initialize songCounter, increment songCounter in loop ♦ conditional loop continues iteration while total<duration of training session ♦ each song duration stored in array ♦ calculate running total in loop ♦ using if condition total >= duration of training session, in loop, to display enough songs message **Step 5** (6 marks) ♦ display number of songs with message ♦ store random number equal to number of songs entered ♦ fixed loop for correct number of songs ♦ display each song number with colon and song duration, within second loop ♦ if statement used to display foam message when randomly selected song number is reached ♦ display total (song duration) with message	**15**	Valid inputs are >=10 and <=30 Award 1 mark if implemented without loop Ensure condition matches the type of loop used. Could loop for length of array. Example format: 1:300 It must be possible for any of the songs to be selected. An alternative solution could make use of the loop variable.

Task	Expected response	Max mark	Additional guidance
1e	Efficiency (2 marks) ♦ two comments on efficiency or inefficiency of own code Robustness (1 mark) ♦ comment on one aspect of robustness of own code	**3**	Candidates require more than "My code…". Efficiency examples could include comparison of: ♦ array vs multiple variables ♦ nested ifs vs individual ifs ♦ use of a loop vs replication of code Robust examples might refer to: ♦ input validation for duration of training session ♦ lack of validation for other inputs