Chhetri Academy

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GCSE COMPUTER SCIENCE

2.2

OCR J277 | Specification point 2.2.2

Data types

Untiered

Past paper question booklet

1	2021	Untiered
question groups	available papers	tier

Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

3 Taylor is writing an algorithm to record the results of an experiment.

Taylor needs to be able to enter a numeric value which is added to a total which initially starts at 0.

Every time she enters a value, the total is output.

The algorithm repeats until the total is over 100.

(a) Write an algorithm to implement Taylor's requirements.

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..... **[6]**

(b) The input to the program could be an integer or real value.

(i) State what is meant by a real data type **and** give an example of this data type.

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..... **[2]**

(ii) State what is meant by an integer data type **and** give an example of this data type.

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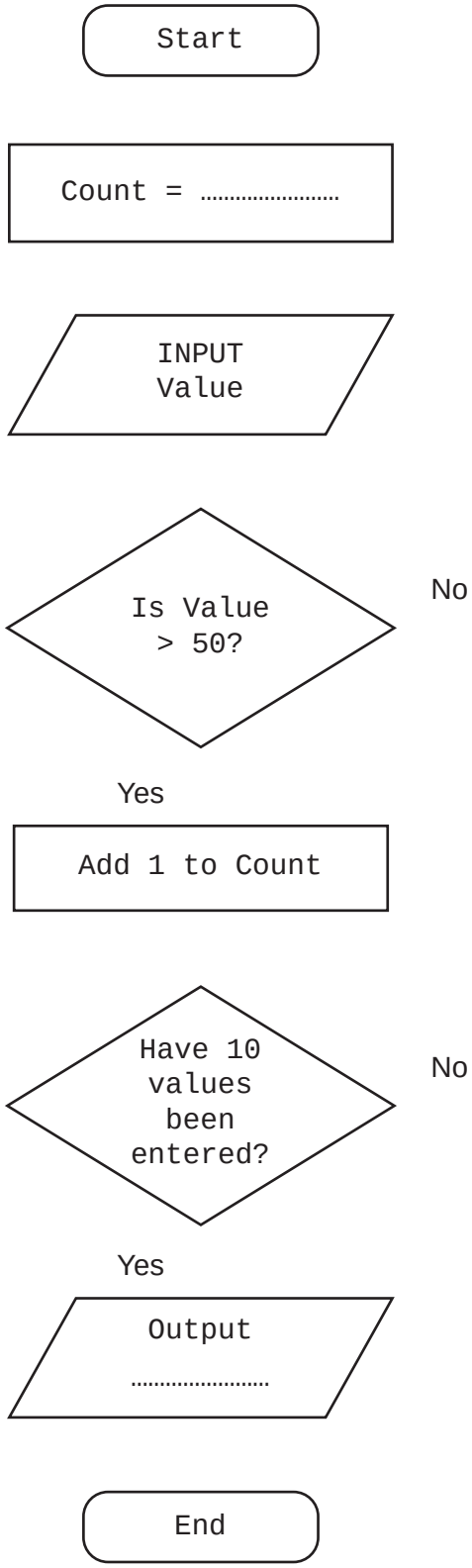
[2]

(c) For the next part of the experiment, Taylor needs to be able to enter 10 values and count how many of the values are over 50, outputting this value once all values have been entered.

(i) Complete the following flowchart to implement this algorithm.



[5]

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(ii) Write a pseudocode algorithm that uses iteration to allow Taylor to:

- enter 10 values
- count how many values are over 50
- output the count of values over 50 after all 10 values are entered.

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..... **[5]**

(d) Taylor used computational thinking techniques to develop the algorithms.

Give **two** computational thinking techniques that Taylor has used, describing how they have been used.

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2 .....

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[4]