



# COMPUTER SCIENCE

## Computer Science bridging work

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Write a computer program in **any text based** language that completes the task below. You will need to comment your code or annotate (explain what it does) your code in a document.

Attempt as many parts of the task as possible.

If you have never programmed before, work through the JavaScript tutorials on either

W3 Schools <https://www.w3schools.com/js/>

Or

Codecademy <https://www.codecademy.com/enrolled/courses/introduction-to-javascript>

And then attempt the tasks.

### Tasks

- 1) Write a program that will simulate rolling a dice with six sides.
  - a. Your program should:
    - i. Count how many times you need to roll the dice to get a 6
    - ii. Count how many times you need to roll the dice to get a cumulative total of over 100
    - iii. Count how many times you need to play until you get a total of exactly 100
      1. This means that if in the first game you get a total of 101, this would count as one play. If in the second game, you get a total of 102 that would be the second game. If in the third game you get exactly 100, the output should be three games.
    - iv. Count how many times you can get a run of the same number on the dice.  
E.G. how many sixes you can get in a row.
      1. Each time you get a new highest number you should output it
    - v. Demonstrate how accurate your dice rolling is by outputting the number of times each number is rolled when you roll the dice 100,000,000,000 times.

### Evidence

To provide evidence you will need.

1. Full code listing (copy and paste your code into a document)
2. Evidence of each task being completed.
  - a. Screenshots of the program outputs
3. Commenting or annotations of your code explaining what it is doing
  - a. You do not need to comment every line, only the important parts that complete the tasks.
4. A review
  - a. A short description of the way you attempted / completed the tasks and how you could improve them.