**Question 1: 4 points**

Generate 100 x and y coordinates where y = 3x^3+23x^2+0.25x+2.9 and x = [0, 1]. Then store the x and y coordinates to a csv file. Ensure that there are only 4 digits after decimal point in the csv file.

**Question 2: 6 points**

**Locality sensitive hashing (LSH)**

Read the document [https://towardsdatascience.com/fast-near-duplicate-image-search-using-locality-sensitive-hashing-d4c16058efcb (Links to an external site.)](https://towardsdatascience.com/fast-near-duplicate-image-search-using-locality-sensitive-hashing-d4c16058efcb) and implement locality sensitive hashing (LSH). You need to test only two hyperplanes x = 0.5 and y = 0.6.

Begin by generating 100 random x, y coordinates in the range of [0, 1]. Then test each of the coordinates whether they lie on either side of the hyperplane. Then print the x and y coordinate and also the boolean corresponding to the test for either hyperplane.