**Data analysis:**

**Step 1:**

1. which courses are the most difficult/easy?
2. take median of each course check out which one is the highest and which is the lowest
3. maybe use spread to check for outliers
4. which students graduated cum laude?
5. check which students have a gpa over 8.0
6. are there courses that seem similar or related?
7. check the similiarity comparing them head to head in terms of grades that were gotten there direct proportional or inverse proportioal
8. as example we can have something like math where you have a 10 and that is directly proportional with programming where you also have a 10 that means that they re related or the same case where you have a 10 at math and a 5 at gym class
9. that the case of inverse proportionality

Is there any correlation between student ids and the gpa they have

as a means to check for fraud

example:

we could have student id #1936 which has a 9.2 gpa and student id #1937 who has 9.3 which is a questionable coincidence. With that we can count the number of times this coincidence happens and if it's way too often then investigation under suspicion of fraud should be undergone.

Question 4: Is there any suspicion of fraud between students?

**Step 2:**

1. Is there an order to courses in which they are offered to students for example?

Check between students if they share the same NG on the same courses but do it sequentally from the first one. You can use an array list for each course. If NG is present in the same course for all students then one can assume that it is due to the course and not due to the individual.

1. Which students are going to graduate soon?

Check which names appear the least on the array lists made beforehand

and have them written out

1. How many students are eligible to graduate this year?

Find out the reason for graduating last year which people had what gpa and the lowest one they had. Then compare it with the current grades present as of this moment with a 0.5 correction rate: a student with a gpa of 4.5 and the minimum gpa is 5 then it should not be problematic as we expect him to pass.

Check whether they can lgraduate if they have a really low grade from a certain course, using the graduates as a reference point.

1. Is it possible to predict passing precentages for the open courses?

Yes using the other grades that the particular students have at their disposal. If they have all around 10 then we expect a student to pass every other course

If a student gpa is for example over 7 we expect them to pass.

Possible idea:

Set a difficulty rating on the courses: Using the student grades one can see where the general population struggles more. Doing an average of all the grades in each course could prove useful for this. Using box plots which present outliers, the mode, the mean and the median.