

Let us consider that we are given a set of data of students’ result in a sessional. The dataset contains features and corresponding classes.

Features: Attendance, Online, Project

Classes: Pass, Fail

For a given set features a decision has to be made if a student will pass or fail in a sessional. Use **ID3 Decision Tree** algorithm in order to make the decision.

Input Format:

The first line contains number of features (**n**).

Next **n** line contains discrete values of features.

The next line contains features of the test data for which you need to determine the class.

The following line contains the number of given train data (**m**).

Following **m** lines contain train data with features and class.

Output Format:

Output is the class for the given test data features (**pass/fail**).

Input Dataset :

<u>Input</u>	<u>Output</u>
3 regular irregular good bad good mediocre bad regular bad bad 11 regular good good pass regular good mediocre pass irregular good bad fail irregular bad bad fail regular good good pass regular good bad pass irregular bad mediocre fail regular good mediocre pass regular good good pass regular bad good pass irregular bad mediocre pass	fail