

Problem Statement: Write a Python code to read a file (input.txt) containing a list of URLs and then read files from an URL and do some processing as mentioned further on the file data. A user reads from a URL should be a JSON file; else, the program should give an output warning stating that the “**file is not a JSON file**” and exit. The code should only consider proper/standard URLs as an input, and if it is not a valid URL, then the program should give an output warning stating that the “**URL is incorrect**” and exit. The JSON file which the code will read has a standard format --

Student name:

Score in subject 1: _

Score in subject 2: _

.

.

Score in subject 10: _

with an overall grade in the semester as a label - Exceptional, Very Good, Good, Fair, and Poor. The user has to apply any feature reduction algorithm like PCA and then perform classification into these classes (Exceptional, Very Good, Good, Fair, and Poor). And also mention accuracy and the False Positive Rate (FPR) using cross-validation.

Final deliverables:

1. Python code named as “**program.py**”
2. A text file containing named as “**output.txt**” accuracy and the False Positive Rate (FPR) using cross-validation for your model.

Evaluation criteria:

We will test your code on the unlabeled student data. Your code should take the input file that contains testing URLs as a command-line argument, and the output should be in a CSV file. Example -

Command Line - \$ python program.py "input.txt"

Predicted Output in CSV:

StudentName1, Good

StudentName2, Poor