**IPO chart:**

|  |  |  |
| --- | --- | --- |
| Input: | Processing: | Output: |
| Text file containing student last names, district codes, and the number of credits taken. | Initialize variables to keep track of the total tuition owed (totalTuitionOwed) and the number of students (studentCount).  Define the cost per credit for in-district (costPerCreditInDistrict) and out-of-district (costPerCreditOutOfDistrict) students.  Open and read the data from the input file.  Read and process each student's last name, district code, and credits taken from the file:  a. Extract the last name as 'lastName'.  b. Extract the district code as 'districtCode'.  c. Extract the credits taken as 'creditsTaken'.  d. Determine the cost per credit based on the district code.  e. Calculate the tuition owed as 'tuitionOwed' (creditsTaken \* costPerCredit).  f. Display the last name, credits taken, and tuition owed for each student.  g. Update the total tuition owed and the student count.  Calculate the average order as 'averageOrder' (totalTuitionOwed / studentCount). | For each student, display the last name, credits taken, and tuition owed.  After processing all students, display the total tuition owed and the number of students. |

**Code:**

totalTuitionOwed = 0

studentCount = 0

costPerCreditInDistrict = 250.00

costPerCreditOutOfDistrict = 500.00

with open("student\_data.txt", "r") as file:

lines = file.readlines()

i = 0

while i < len(lines):

lastName = lines[i].strip()

districtCode = lines[i + 1].strip()

creditsTaken = int(lines[i + 2].strip())

if districtCode == "I":

costPerCredit = costPerCreditInDistrict

else:

costPerCredit = costPerCreditOutOfDistrict

tuitionOwed = creditsTaken \* costPerCredit

print(f"Last Name: {lastName}")

print(f"Credits Taken: {creditsTaken}")

print(f"Tuition Owed: ${tuitionOwed:,.2f}")

print()

totalTuitionOwed += tuitionOwed

studentCount += 1

i += 3

print(f"Total Tuition Owed: ${totalTuitionOwed:,.2f}")

print(f"Number of Students: {studentCount}")

**File with data:**

Jones

I

12

Adams

I

10

Baker

O

12

Smith

O

16