HOMEWORK 4 - Input/Output with Files

Due Date:11/17/2006

Problem statement: Write a program to read the file STUDENT.DAT

- the description of the file format is on page A13
- it can download from: http://www.cis.umassd.edu/%7Ex2zhang/courses/CIS261/class/student.dat

1. Calculate and display on screen:
   1.1 the average cumulative GPA for all male students
   1.2 the average cumulative GPA for all female students
2. Produce a report (in a new file named "report.dat") for all freshmen with GPAs below 2.0. This report should include the student's number and cumulative GPA, with appropriate headings.

Requirement

Follow the following steps to solve the problem:

1. Problem analysis and specification.
* What the problem is,
* What the input and output information are
2. Data organization and algorithm design.
* How to organize and store data, define variables (name and type)
* Develop algorithms - procedures to process the data and produce the required output, draw flow chart to represent the algorithm
3. Write the program code. You need have the problem specification included as the comments in the beginning. You need write appropriate comments to explain what you are doing.
4. Execute the program with the input data from file STUDENT.DAT.

What to submit (submit it on class 11/17/2006)

1. The written specification
2. Variables names and types
3. Flow Chart
4. Source program
5. Sample execution results – report.dat

Demo your homework during any tutoring hours before or on due date 11/17/2006.

Help available

1. Instructor office hour: MW 2-3:30PM, Fri. 2-3PM
2. TA Tutoring hours: Mon. 3 – 5PM (DION 311), Thursday 6:30-8:30PM (DION 303)
3. If you finish your lab earlier, you can use the lab time to work on your homework.

Grading Policy

1. Written specification and flow chart (2)
2. Source code with good comments (1)
3. Test result and demo (2)