|  |
| --- |
| **Problem**: Implement a class to represent a College Student. |
| A new College Student may be a *true freshman*, or a *transfer student* bringing up to 60 credits previously earned at another college. Provide the following functionality:  QUERIES   * The number of *transfer credits* * The number of *earned credits* * *GPA* (grade point average), based on earned credits only * *year* (based on total credits): ***freshman*, *sophomore*, *junior*, *senior*** * graduation *eligibility*: at least 120 total credits, GPA at least 2.0   UPDATES  A student’s status is updated whenever they complete a course. The information provided are 1) the number of *course credits*, 2) student’s *letter grade*, **A**, **B**, **C**, **D** or **F** for the course. |

**Year** **Credits** **Letter Grade** **Grade Points**

Freshman < 30 **A** 4

Sophomore 30 … 59 **B** 3

Junior 60 … 89 **C** 2

Senior >= 90 **D** 1

**F** 0

**College Student**

|  |
| --- |
| **Class Name**  CollegeStudent |
| **State**  ***variables***  **int** transferCredits  **int** earnedCredits  **int** gradePoints |
| **Initialization**  ***constructors***  CollegeStudent()  CollegeStudent(**int** credits) |
| **Behavior**  ***accessor methods***  **int** getTransferCredits()  **int** getEarnedCredits()  ***mutator methods***  **void** completeCourse(**int** credits, **char** grade)  ***other methods***  **double** gpa()  String year()  **boolean** isGraduationEligible() |