



| CourseTransactions |
|--|
| void adding(int quantity) void dropping(int quantity) |

| CourseOperations |
|--|
| void insertCourse(Course c) void removeCourse(Course c) Course getCourse(int CourseNumber) void showAllCourse() |

| StudentOperations |
|--|
| void setStudent(Student s) void getStudent(int sid) void insertStudent(Student s) void removeStudent(Student s) void showAllStudents() |

| FacultyOperations |
|--|
| void setFaculty(Faculty e) void getFaculty(String fid) void insertFaculty(Faculty e) void removeFaculty(Faculty e) void showAllFaculty() |

| Course |
|---|
| int courseNumber int credit |
| void setCourseNumber(int courseNumber) void setCredit(int credit) int getCourseNumber() int getCredit() void showInfo() |

| Student |
|---|
| String name int sid Course courses |
| void setName(String name) void setSid(int sid) String getName() int getSid() |

| Faculty |
|--|
| String name String fid double salary |
| void setName(String name) void setFid(int fid) void setSalary(double salary) String getName() int getFid() double getSalary() |

| University |
|--------------------------------------|
| Student student Faculty faculties |

Start

The **Start** class contains the main method. Inside the main method the application prompts the user to choose among the following options:

1. Faculty Management
2. Student Management
3. Course Transactions
4. Exit

Upon choosing any of the option the user is given some further options to choose from:

Options for Faculty Management:

- | | | | |
|-----------------------|----------------------------|---------------------|---------------|
| 1. Insert New Faculty | 2. Remove Existing Faculty | 3. Show All Faculty | 4. Going Back |
|-----------------------|----------------------------|---------------------|---------------|

Options for Student Management:

- | | | | |
|-----------------------|----------------------------|---------------------|---------------|
| 1. Insert New Student | 2. Remove Existing Student | 3. Show All Student | 4. Going Back |
|-----------------------|----------------------------|---------------------|---------------|

Options for Course Transactions:

- | | | |
|------------------|--------------------|---------------|
| 1. Adding Course | 2. Withdraw Course | 3. Going Back |
|------------------|--------------------|---------------|

The application will prompt the user to give input for the necessary values as per the choice. The application will repeatedly go on according to the user choices.

Notes:

1. Here the purple box are interfaces.
2. Dotted line indicates that there is an inheritance between the classes.
3. Here Course Transaction history should be stored in a file named "History.txt"
4. You must do exception handling in your code where necessary.
5. All the classes will be inside one package and all other interfaces should be inside another package.