Các class:

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| Users (Class cha) |
| tenDN: string  matKhau: string  Menu(): void  getTenDN() : string  kiemTraMatKhau(): bool  DoiMatKhau(): void |

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| Admin (Class kế thừa) |  | Student (Class kế thừa) |
| Id: string  Ten: string |  | Id: string  hoTen: string  namHoc: int  namHoc: string |
| Menu(): void  themHocPhan(vector<Course>& dsCourse)  xoaHocPhan(vector<Course>& dsCourse)  hienThiHocPhan(const vector<Course>&) |  | Menu(): void  dangKyHocPhan(const vector<Course>&)  hienThiHocPhan(const vector<Course>&) |

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| Course |
| CourseID: string  courseName: string  credits: string |
| getCourseID: string  getCourseName: string  getCredits(): string  display(): void  loadFromFile(istream&): bool  savetoFile(ostream&): void |

Tổ chức cấu trúc dữ liệu:

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| Vector |
| vector<User\*> dsUser; // lưu các User (Admin, Student)  vector<string> hocPhanDaDangKy; // lưu courseID các môn Student đã đăng ký  vector<Course> danhSachHocPhan; // lưu danh sách Course  vector<Student> students; // lưu danh sách Student |

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| String |
| string tenDN, matKhau;  string id, hoTen, nganhHoc;  string courseID, courseName; |

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| Con trỏ |
| User\* u = nullptr; |

File I/O: