```
User
                                              private:
                                                  string userID
                                                  string password
                                              public:
                                                  User(string a, string b)
                                                  string GetuserID()
                                                  string Getpassword()
                           Advisor
                                                                                             Student
private:
                                                                 private:
 string fName
                                                                    string firstName
 string IName
                                                                    string lastName
 string room
                                                                    string major
 string phone num
                                                                    int TotalHours
 vector<Student> advisees
                                                                    double GPA
                                                                    vector<string> notes
public:
   Advisor(string ID, string pw, string fname, string lname,
                                                                 public:
string room, string phone, vector<Student> ad): User(ID, pw)
                                                                    Student(string a, string p, string b, string c, int d, double e,
   string GetID()
                                                                 string f, vector <string> g) :User(f, p)
   string GetPassword()
                                                                    string GetID()
   string GetFirstName()
                                                                    string GetPassword()
   string GetLastName()
                                                                    string GetFirstName()
   string GetRoom()
                                                                    string GetLastName()
   string GetPhoneNum()
                                                                    string GetMajor()
   string GetAdvisees()
                                                                    string GetTotalHours()
    vector<Student> GetallAdvisees()
                                                                    string GetGPA()
                                                                    vector<string> GetNotes()
    bool SearchStudent(string StudentID)
                                                                    void menu()
   void printMenu()
   void printAdviseeList(vector<Student> students)
                                                                    void view()
   void printAdviseeList()
                                                                    void update()
    bool static sortByID(Student left, Student right)
                                                                    void ChangeMajor(string f)
    bool static sortByMajor(Student left, Student right)
                                                                    void ChangeGPA(double g)
    bool static sortByHours(Student left, Student right)
                                                                    void changeTotalHours(int k)
   void search()
                                                                    void SetNote(string Note)
   void printNotesMenu(vector<Student>* allStudents)
   void showNotes()
   void addNote(vector<Student>* allStudents)
   void addAdvisee(vector<Advisor> b. vector<Student> k)
   void removeAdvisee()
   void moveAdvisees(vector<Advisor>* allAdvisors,
vector<Student>* allStudents)
   void adviseesPushBack(Student student)
   void searchNonAdvisee(vector<Student> allStudents,
```

vector<Advisor> allAdvisors)

void showMajorDetails()

void printAdvisorList(vector<Advisor> allAdvisors)

private: string filename vector <string> dataVector public: FileIO(string File) void readFile() void writeFile(vector <string> data) void printData() vector <string> returnData()