EECE.2160: ECE Application Programming

Fall 2018

Lecture 31: PE3 (Structures)
November 28, 2018

For today's exercise, you will complete the following functions that work with the structures `Name` and `SINew`. The structure definitions are listed below:

```
typedef struct {
    char first[50];
    char middle;
    char last[50];
} Name;

typedef struct {
    Name sname;
    unsigned int ID;
    double GPA;
} SINew;
```

The function descriptions are as follows:

For the `Name` structure:

- **`void printName(Name *n)`**: Print the name pointed to by `n`, using format `<first> <middle>. <last>`
- **`void readName(Name *n)`**: Prompt for and read a first, middle, and last name, and store them in the structure pointed to by `n`

For the `SINew` structure:

- **`void printStudent(SINew *s)`**: Print information about the student pointed to by `s`
- **`void readStudent(SINew *s)`:** Prompt for and read information into the student pointed to by `s`
- **`void printList(SINew list[], int n)`:** Print the contents of an array list that contains `n` `StudentInfo` structures
- **`int findByLName(SINew list[], int n, char lname[])`:** Search for the student with last name `lname` in the array `list`. Return the index of the structure containing that last name, or -1 if not found
- **`int findByID(SINew list[], int n, unsigned int sID)`**: Search for the student with ID # `sID` in the array `list`. Return the index of the structure containing that last name, or -1 if not found

From Name.c:

```
// Print contents of Name struct
void printName(Name *n) {




}

// Read information into existing Name
void readName(Name *n) {







}
```

From SINew.c:

```
// Print information about student
void printStudent(SINew *s) {




}

// Reads student information into existing structure
void readStudent(SINew *s) {









}
```

From SINew.c (continued):

```
// Print list of students
void printList(SINew list[], int n) {









}

// Find student in list, based on last name
// Returns index if student found, -1 otherwise
int findByLName(SINew list[], int n, char lname[]) {









}
```

From SINew.c (continued):

```
// Find student in list, based on ID #
// Returns index if student found, -1 otherwise
int findByID(SINew list[], int n, unsigned int sID) {




}
```