1) Implement the **List ADT using Arrays** for the student record. The student record is defined as

```
typedef struct student
{
        char name[32];
        char dept[5];
        float CGPA;
} stud;
```

2) Implement a **singly linked list** (simple data structure) that will hold information about the students who have been enrolled in different subjects. This data structure must support various queries that will allow the users to keep track about the current enrollment of subjects for each student, as well as updates that will allow users to feed information about new enrollment (such as adding new subjects).

(i) The basic definition of the student is defined as :

```
typedef struct student_t
{
        char name[32];
        subject_t *subject;
        struct student_t *next;
} student_t ;
```

It contains the name of the student and a pointer to list of subjects which have been enrolled by him.

(ii) The basic definition of the subject is defined as :

```
typedef struct subject_t
{
        char name[30];
} subject_t ;
```

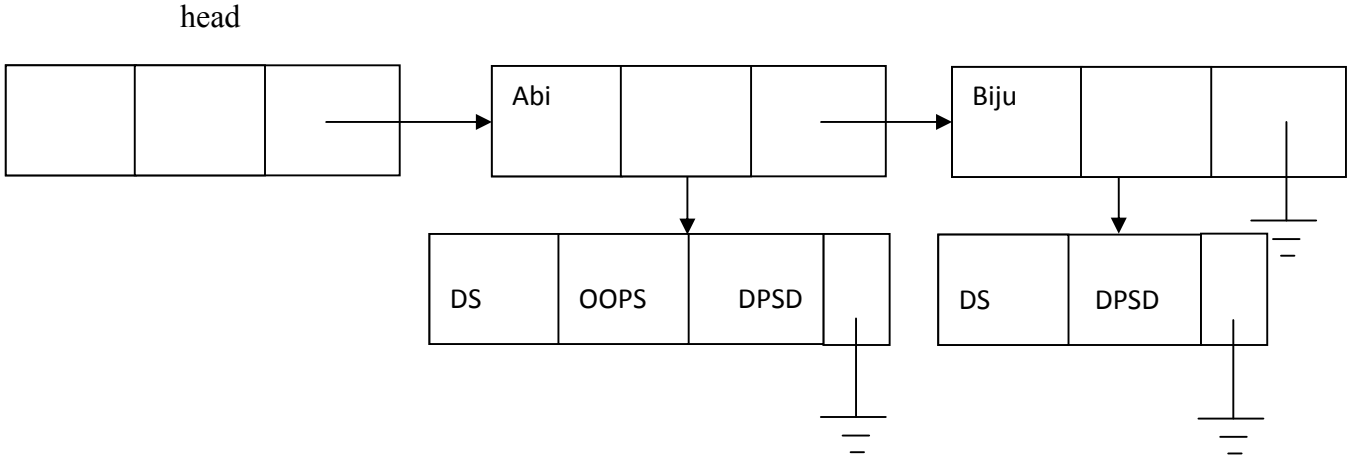
It contains the name of a subject.

1. **Prototype** int create_student(char* studname)
   Description Create a new student to the data base.

Inputs name - the name of the student. User is responsible to make sure that the new student's name differs from all existing student's names.
Output function returns 1 upon success, 0 otherwise.

2. **Prototype** int create_subject(char* subjectname)
   Description Create a new subject for the corresponding student.
   Inputs name - the name of the subject. User is responsible to make sure that the new subject's name differs from all existing subjects' names.
   Output function returns 1 upon success, 0 otherwise.

Hint: Refer the website : https://gist.github.com/nikAizuddin/c666f9229135e1d8feab



3. Insert First
4. Insert at given Position
5. Insert at Last
6. Display List (along with subjects enrolled)
7. Delete First
8. Delete at Position
9. Delete at Last
10. Modify the record
11. Find record/records based on student name / subject name
    Example 1: Display the students record whoever enrolled for the given subject name
    Example 2: Display the number of students enrolled for the given subject name
    Example 3: Find the student record when the name of student is given