1. **Chicago college Placement Officer Mr. Mahon Raj has all the details of the students who are placed from the college along with the company name and passed out year. Since the ABN visit is in March 2021, Placement Officer has two tasks. The first one displays the students who are placed in 2020 and the second one displays the student details who has the highest Package. Please help Mr. Mahon Raj to do the tasks.**

**Problem Solving Framework**

**I. Understanding the Problem:**

* 1. **Knowns: Individual Placed student details.**
  2. **Unknowns: List of placed students in Chicago college.**
  3. **Extra Information: ABN visit is in March 2021, Placement Officer Mr. Mahon Raj, Chicago college**
  4. **Assumptions: NIL**

**II. Devise a Plan:**

**1. Problem Representation: Numerical**

**2. Problem Solving Strategy: Mathematical Reasoning**

**3. Identification of Node and its Members:**

* + **Node: placed\_student.**
  + **Members: student name, branch, company name, year, package;**

**4. Identification of Operations:**

* + **Creation of Node.**
  + **Reading the data for each Node.**
  + **Insertion of a Node at the end of the List.**
  + **Displaying the List.**
  + **Display list of students placed in the year 2020**
  + **Display student details who got highest package.**
* **III. Carry Out a Plan:**
* **Solution for the Plan in terms of Algorithm only for the expected task,not for basic operations and Write modular Complete C program.**

**Algorithm: Display list of students placed in the year 2020.**

* **Step 1: Start**
* **Step 2: Check whether the list is empty.**
* **Step 3: Follow the cur pointer.**
* **Step 4:If cur year matches with the year 2020 Display the contents of the cur node as it is pointed by cur pointer**
* **Step 5: Stop when the cur’s next pointer reaches NULL.**
* **Step 6: Stop**

**Algorithm: Display student details who got highest package.**

* **Step 1: Start**
* **Step 2:Declare a pointer max which holds the details of student with highest package**
* **Step 3: Check whether the list is empty.**
* **Step 4: Follow the cur pointer.**
* **Step 5:Check If list contains only one node assign cur to max. Otherwise compare max with cur->package if It is true update max by cur .**
* **Step 6: Stop when the cur’s next pointer reaches NULL. Display the contents of max.**
* **Step 7: Stop**