

CAPSTONE PROJECT P2-DA-IICT Placement Manager

TEAM NAME:-PROCESSING PRODIGIES

GITHUB REPOSITORY LINK:-

https://github.com/VrajParikh1512/Capstone_Processing_Prodigies

TEAM MEMBERS:-

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Description:-

We have built a Placement Manager program for DAIICT, in which we have infused various Functions which eases the analysis of the placement process in our College.

We have a LINKED LIST Data structure to store all of the Data of the students after extracting it from a .csv file. We have further used Functions such as Sort and Search to help analyze the data in an efficient manner. We have also added certain more functions that give ideas about the placement statistics such as Mean, Median, Min-Max package etc. Using these placement Statistics information we have categorized the companies into Dream and Super dream companies. We have created a function named 'acceptance rate' that further helped us to create a 'Trajectory' that will guide the future batches for their placement.

Following is the detailed description of the functions that we have used:-

1. Search Operations:- We have built Various Search Operations such as Search by ID, Name, Branch and Company that will help the user access any Specific Data that it wants with ease. Here we have used the Linear Search Algorithm.
2. Sort Operations:- In our Project we have built Sort functions that can help us sort all of the data according to the ID and Package. Here we have used The Merge Sort algorithm over other sorting algorithms (Such as selection, bubble and insertion sort) because it has the best time complexity $O(N \log N)$ and best space complexity $O(1)$. This Sort operation was further used to design Functions such as Min-Max, Median, Dream-SuperDream company etc.

3. Mean and Median Function:- Using this function we can calculate the Mean and Median Package of the Batch.
4. Min-Max Function:- This function gives us the idea about the minimum and the maximum salary offered to the students that year.
5. Dream-Super Dream Companies:- We have divided the companies into categories such as Dream (10-25 LPA) and Super Dream (25+ LPA). and this Function lists all the Dream and Super dream Companies that visited the campus in a specific year.
6. Acceptance Rate:- This Function calculates the Number of students selected in each round of any company.
7. Trajectory:- This Function gives advice to the Students who will sit in the upcoming placements about what a student must do to get placed in a company.

Provide a rationale for selecting specific data structures for your Application:-(Linked List):-

We have Used the Linked List Data Structure in our project over others because of the following reasons:-

1. Easier Implementation:- Linked list is easier to Implement over other Data Structures.
2. Dynamic Sizing:- A linked List has an Dynamic Size unlike an Array thus we can easily Add/Delete nodes that would prevent the Wastage/Shortage of memory.

Below we have given the Pseudocode and time and space complexity of all the functions we have used in our program:-

1.void traverseLL(Node* q):-

Pseudocode:-

```

q = head
while (q is not null) do
    Print q's attributes
    q = q->link
endwhile
Stop

```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

2.Node* Store_data(Node* &head, const string &filename, Node* last):-

Pseudocode:-

```

open the file with filename
if (file is not opened successfully) then
    print("Unable to open file")
    exit()
else

```

```

read round number from the file into str1
read company name into cmpy
while (cmpy does not start with '[') do
    read next line into cmpy
endwhile
while (not end of file) do
    p = getnode()
    if (p == NULL) then
        print("Memory Underflow")
        exit()
    else
        read student data from file into p's attributes
        set p's company attribute to cmpy without square brackets
        set p's round attribute based on str1
        if (head is null) then
            set head to p
        else
            set last's link to p
        endif
        set last to p
    endif
endwhile
close the file
endif
Stop

```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(N)

3.void search_node_by_name(Node* q):

Pseudocode:-

```

count = 0
print("Enter Name you want to search for:")
read temp
while (q is not null) do
    if (q's Name equals temp) then
        increment count
        Print q's details
    endif
    Move q to the next node
endwhile
if (count is 0) then
    print("Name not found")
endif

```

Stop

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

4.void search node by ID(Node* q):-

Pseudocode:-

```
count = 0
print("Enter ID of student you want to search for :")
read temp
while (q is not null) do
    if (q's Id equals temp) then
        increment count
        Print q's details
    endif
    Move q to the next node
endwhile
if (count is 0) then
    print("Id not found")
endif
Stop
```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

5.void search node by Company(Node* q):-

Pseudocode:-

```
count = 0
print("Enter company name you want to search for:")
read temp
while (q is not null) do
    if (q's Company equals temp) then
        increment count
        Print q's details
    endif
    Move q to the next node
endwhile
if (count is 0) then
    print("Company name not found")
endif
Stop
```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

6. void search_node_by_Branch(Node* q):-

Pseudocode:-

```
count = 0
print("Enter branch name you want to search for:")
read temp
while (q is not null) do
    if (q's Programme equals temp) then
        increment count
        Print q's details
    endif
    Move q to the next node
endwhile
if (count is 0) then
    print("Branch name not found")
endif
Stop
```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

7. Node* merge2sortedLL_id(Node* temp1, Node* temp2):-

Pseudocode:-

```
dummy = getnode()
temp = dummy
while (temp1 is not null and temp2 is not null) do
    if (temp1's Id is less than or equal to temp2's Id) then
        set temp's link to temp1
        Move temp1 to the next node
    else
        set temp's link to temp2
        Move temp2 to the next node
    endif
endwhile
if (temp1 is null) then
    set temp's link to temp2
else if (temp2 is null) then
    set temp's link to temp1
endif
return dummy's link
Stop
```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

8. void mean_package(Node* q):-

Pseudocode:-

```
count = 0
sum = 0
while (q is not null) do
    pkg = convert q's Package to integer
    sum = sum + pkg
    increment count
    Move q to the next node
endwhile
mean = sum / count
Print "Mean Package = ", mean
Stop
```

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

9. void Median_package(Node* head):-

Pseudocode:-

```
length = findLength(head)
Sortbypackage_asc(head)
if (length is odd) then
    middle_node = findMiddleElement_id(head)
    pkg1 = convert middle_node's Package to integer
    pkg2 = convert next node's Package to integer
    median = (pkg1 + pkg2) / 2
else
    middle_node = findMiddleElement_id(head)
    median = convert middle_node's Package to integer
endif
Print "Median Package = ", median
Stop
```

TIME COMPLEXITY:-O(N LOG N)

SPACE COMPLEXITY:-O(1)

10. void max_min_package(Node* head):-

Pseudocode:-

```
Sortbypackage_asc(head)
traverseLL(head)
min_package = head's Package
```

```

while (head's link's link is not null) do
    Move head to the next node
endwhile
Print "Minimum package: ", min_package
max_package = head's Package
Print "Maximum package: ", max_package
Stop

```

TIME COMPLEXITY:-O(N LOG N)

SPACE COMPLEXITY:-O(1)

11. void acceptance_rate(Node* head):-

Pseudocode:-

```

count = 0
print("Enter the name of the company: ")
read str
R1 = 0
R2 = 0
R3 = 0
R4 = 0
R5 = 0
while (p is not null) do
    if (p's Company equals str) then
        if (p's r1 is true) then
            increment R1
        endif
        if (p's r2 is true) then
            increment R2
        endif
        if (p's r3 is true) then
            increment R3
        endif
        if (p's r4 is true) then
            increment R4
        endif
        if (p's r5 is true) then
            increment R5
        endif
    endif
    Move p to the next node
endwhile
print("Number of Students selected in Round 1: ", R1)
print("Number of Students selected in Round 2: ", R2)
print("Number of Students selected in Round 3: ", R3)

```

```
print("Number of Students selected in Round 4: ", R4)
print("Number of Students selected in Round 5: ", R5)
```

Stop

TIME COMPLEXITY:-O(N)

SPACE COMPLEXITY:-O(1)

12. void trajectory(Node* head):-

Pseudocode:-

```
count = 0
print("Enter the name of the company: ")
read str
R1 = 0
R2 = 0
R3 = 0
R4 = 0
R5 = 0
while (q is not null) do
    if (q's Company equals str) then
        if (q's r1 is true) then
            increment R1
        endif
        if (q's r2 is true) then
            increment R2
        endif
        if (q's r3 is true) then
            increment R3
        endif
        if (q's r4 is true) then
            increment R4
        endif
        if (q's r5 is true) then
            increment R5
        endif
    endif
    Move q to the next node
endwhile
ar2 = (R2/R1)*100
ar3 = (R3/R2)*100
ar4 = (R4/R3)*100
ar5 = (R5/R4)*100
if (ar2 is greater than or equal to 70) then
    print("The candidate has a good chance of qualifying Round 2 with basic preparation.")
```

```
endif
if (ar2 is less than 70 and ar2 is greater than or equal to 40) then
    print("The candidate has a mediocre chance of qualifying Round 2 and should focus more on
Round 2.")
endif
if (ar2 is less than 40 and ar2 is greater than or equal to 10) then
    print("The candidate should focus and prepare for this round very diligently as Round 2 is
tough and if the candidate is able to clear this round, he will be very close to selection.")
endif
if (ar3 is greater than or equal to 80) then
    print("The candidate has a good chance of qualifying Round 3 with basic preparation and
must prepare for further rounds in advance.")
endif
if (ar3 is less than 80 and ar3 is greater than or equal to 40) then
    print("The candidate has a mediocre chance of qualifying Round 3 and should focus more on
Round 3.")
endif
if (ar3 is less than 40 and ar3 is greater than or equal to 10) then
    print("The candidate should focus and prepare for this round very diligently as Round 3 is
tough and if the candidate is able to clear this round, he will be very close to selection.")
endif
if (ar4 is greater than or equal to 85) then
    print("The candidate has a good chance of qualifying HR Round with basic preparation.")
endif
if (ar4 is less than 85 and ar4 is greater than or equal to 40) then
    print("The candidate has a mediocre chance of qualifying HR Round and should focus more
on his communication skills.")
endif
if (ar4 is less than 40 and ar4 is greater than or equal to 10) then
    print("The candidate must focus on building his overall personality and enhance his
communication skill as lays much emphasis on the HR Round.")
endif
if (ar5 is greater than or equal to 70) then
    print("The candidate has a good chance of qualifying Final Round with basic preparation.")
endif
if (ar5 is greater than or equal to 40 and ar5 is less than 70) then
    print("The candidate must prepare well for this round irrespective of high chances in the Final
Round.")
endif
if (ar5 is less than 80) then
    print("The candidate has reached till this stage with extreme dedication and persistence but it
is tough to clear this round.")
endif
Stop
```

TIME COMPLEXITY:-O(N)
SPACE COMPLEXITY:-O(1)

13. void dream_superdream(Node* head):-

Pseudocode:-

Sortbypackage_dsc(head)

p = head

Initialize an empty set for tracking unique companies

Print "Super - Dream Companies:"

while (p's link is not null) do

 if (p's Package \geq 25) then

 if (p's Company is not in the set of unique companies) then

 Print p's Company

 Add p's Company to the set of unique companies

 endif

 endif

 Move p to the next node

endwhile

Print "Dream Companies:"

Reset p to head

Initialize an empty set for tracking unique companies

while (p's link is not null) do

 if (p's Package \geq 10 and p's Package $<$ 25) then

 if (p's Company is not in the set of unique companies) then

 Print p's Company

 Add p's Company to the set of unique companies

 endif

 endif

 Move p to the next node

endwhile

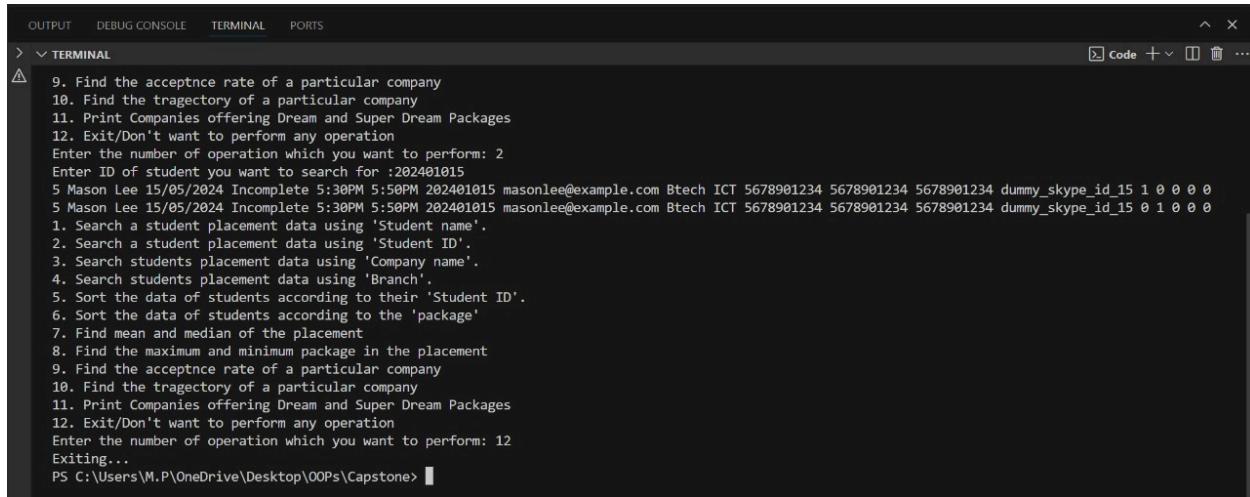
Stop

TIME COMPLEXITY:-O(N LOG N)
SPACE COMPLEXITY:-O(1)

SWITCH CASE 1 OUTPUT:-

```
PS C:\Users\M.P\OneDrive\Desktop\OOPs> cd "c:\Users\M.P\OneDrive\Desktop\OOPs\Capstone\" ; if ($?) { g++ Version_13.cpp -o Version_13 } ; if ($?) { .\Version_13 }
1. Search a student placement data using 'Student name'.
2. Search a student placement data using 'Student ID'.
3. Search students placement data using 'Company name'.
4. Find the acceptance rate of a particular company
10. Find the trajectory of a particular company
11. Print Companies offering Dream and Super Dream Packages
12. Exit/Don't want to perform any operation
Enter the number of operation which you want to perform: 1
Enter Name you want to search for :John Doe
1 John Doe 01/05/2024 Complete 8:00AM 8:20AM 202400001 johndoe@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_1 1 0 0 0 0
1 John Doe 01/05/2024 Complete 8:00AM 8:20AM 202400001 johndoe@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_1 0 1 0 0 0
1 John Doe 01/05/2024 Complete 8:00AM 8:20AM 202400001 johndoe@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_1 0 0 1 0 0
1 John Doe 01/05/2024 Complete 8:00AM 8:20AM 202400001 johndoe@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_1 0 0 0 1 0
1 John Doe 01/05/2024 Complete 8:00AM 8:20AM 202400001 johndoe@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_1 0 0 0 0 1
1. Search a student placement data using 'Student name'.
2. Search a student placement data using 'Student ID'.
3. Search students placement data using 'Company name'.
4. Search students placement data using 'Branch'.
5. Sort the data of students according to their 'Student ID'.
6. Sort the data of students according to the 'package'
7. Find mean and median of the placement
8. Find the maximum and minimum package in the placement
9. Find the acceptance rate of a particular company
10. Find the trajectory of a particular company
11. Print Companies offering Dream and Super Dream Packages
12. Exit/Don't want to perform any operation
Enter the number of operation which you want to perform: 12
Exiting...
PS C:\Users\M.P\OneDrive\Desktop\OOPs\Capstone>
```

SWITCH CASE 2 OUTPUT:-



```
OUTPUT DEBUG CONSOLE TERMINAL PORTS
> ▾ TERMINAL
⚠ 9. Find the acceptance rate of a particular company
10. Find the trajectory of a particular company
11. Print Companies offering Dream and Super Dream Packages
12. Exit/Don't want to perform any operation
Enter the number of operation which you want to perform: 2
Enter ID of student you want to search for :202401015
5 Mason Lee 15/05/2024 Incomplete 5:30PM 5:50PM 202401015 masonlee@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_15 1 0 0 0 0
5 Mason Lee 15/05/2024 Incomplete 5:30PM 5:50PM 202401015 masonlee@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_15 0 1 0 0 0
1. Search a student placement data using 'Student name'.
2. Search a student placement data using 'Student ID'.
3. Search students placement data using 'Company name'.
4. Search students placement data using 'Branch'.
5. Sort the data of students according to their 'Student ID'.
6. Sort the data of students according to the 'package'
7. Find mean and median of the placement
8. Find the maximum and minimum package in the placement
9. Find the acceptance rate of a particular company
10. Find the trajectory of a particular company
11. Print Companies offering Dream and Super Dream Packages
12. Exit/Don't want to perform any operation
Enter the number of operation which you want to perform: 12
Exiting...
PS C:\Users\M.P\OneDrive\Desktop\OOPs\Capstone>
```

SWITCH CASE 3 OUTPUT:-

```
PS C:\Users\MP\OneDrive\Desktop\OOPs> cd "c:\Users\MP\OneDrive\Desktop\OOPs\Capstone\" ; if ($?) { g++ Version_13.cpp -o Version_13 } ; if ($?) { ./Version_13 }
1. Search a student placement data using 'Student name'.
2. Search a student placement data using 'Student ID'.
3. Search students placement data using 'Company name'.
4. Search students placement data using 'Branch'.
5. Sort the data of students according to their 'Student ID'.
6. Sort the data of students according to the 'package'
7. Find mean and median of the placement
8. Find the maximum and minimum package in the placement
9. Find the acceptance rate of a particular company
10. Find the trajectory of a particular company
11. Print Companies offering Dream and Super Dream Packages
12. Exit/Don't want to perform any operation
Enter the number of operation which you want to perform: 3
Enter company name you want to search for: abc pvt ltd
1 Liam Lopez 11/05/2024 Complete 8:05AM 8:25AM 202401011 liamlopez@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_11 1 0 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 20240012 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 1 0 0 0 0
3 Noah Gonzalez 13/05/2024 Complete 1:20PM 1:40PM 202401013 noahgonzale@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_13 1 0 0 0 0
4 Isabella Rodriguez 14/05/2024 Incomplete 3:50PM 4:10PM 202400104 isabellarodriguez@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_14 1 0 0 0 0
5 Mason Lee 15/05/2024 Incomplete 5:30PM 5:50PM 202401015 masonlee@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_15 1 0 0 0 0
6 Charlotte Perez 16/05/2024 Complete 7:15AM 7:35AM 202400116 charlotteperez@example.com Mtech ICT 6789012345 6789012345 6789012345 dummy_skype_id_16 1 0 0 0 0
7 Lucas Scott 17/05/2024 Complete 9:00AM 9:20AM 202401017 lucasscott@example.com Btech ICT 7890123456 7890123456 7890123456 dummy_skype_id_17 1 0 0 0 0
1 Liam Lopez 11/05/2024 Complete 8:05AM 8:25AM 202401011 liamlopez@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_11 1 0 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400102 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 1 0 0 0 0
3 Noah Gonzalez 13/05/2024 Complete 1:20PM 1:40PM 202401013 noahgonzale@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_13 1 0 0 0 0
4 Isabella Rodriguez 14/05/2024 Incomplete 3:50PM 4:10PM 202400104 isabellarodriguez@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_14 1 0 0 0 0
5 Mason Lee 15/05/2024 Incomplete 5:30PM 5:50PM 202401015 masonlee@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_15 1 0 0 0 0
1 Liam Lopez 11/05/2024 Complete 8:05AM 8:25AM 202401011 liamlopez@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_11 1 0 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400102 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 1 0 0 0 0
3 Noah Gonzalez 13/05/2024 Complete 1:20PM 1:40PM 202401013 noahgonzale@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_13 1 0 0 0 0
1 Liam Lopez 11/05/2024 Complete 8:05AM 8:25AM 202401011 liamlopez@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_11 1 0 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400102 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 1 0 0 0 0
3 Noah Gonzalez 13/05/2024 Complete 1:20PM 1:40PM 202401013 noahgonzale@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_13 1 0 0 0 0
1 Liam Lopez 11/05/2024 Complete 8:05AM 8:25AM 202401011 liamlopez@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_11 1 0 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400102 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 1 0 0 0 0
```

SWITCH CASE 4 OUTPUT:-

```
> ✘ TERMINAL
⚠ Layla Simmons 27/05/2024 Complete 9:45AM 10:05AM 202401027 laylasimmons@example.com Btech ICT 7890123456 7890123456 dummy_skype_id_27 def l1p. LPA 1 0 0 0 0
1 Mia Long 31/05/2024 Complete 8:15AM 8:35AM 202401031 miaalong@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_31 jkl limited. 69 LPA 0 0 0 0 1
1 Mia Long 31/05/2024 Complete 8:15AM 8:35AM 202401031 miaalong@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_31 jkl limited. LPA 0 0 0 1 0
1 Mia Long 31/05/2024 Complete 8:15AM 8:35AM 202401031 miaalong@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_31 jkl limited. LPA 0 0 1 0 0
1 Mia Long 31/05/2024 Complete 8:15AM 8:35AM 202401031 miaalong@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_31 jkl limited. LPA 0 1 0 0 0
1 Mia Long 31/05/2024 Complete 8:15AM 8:35AM 202401031 miaalong@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_31 jkl limited. LPA 1 0 0 0 0
3 Abigail Cooper 02/06/2024 Complete 1:30PM 1:50PM 202401033 abigailcooper@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_33 jkl limited. LPA 0 0 1 0 0
3 Abigail Cooper 02/06/2024 Complete 1:30PM 1:50PM 202401033 abigailcooper@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_33 jkl limited. LPA 0 1 0 0 0
5 Harper Richardson 04/06/2024 Incomplete 5:40PM 6:00PM 202401035 harperrichardson@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_35 jkl limited. LPA 0 1 0 0 0
0
5 Harper Richardson 04/06/2024 Incomplete 5:40PM 6:00PM 202401035 harperrichardson@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_35 jkl limited. LPA 1 0 0 0 0
0
12 Sofia Perez 08/06/2024 Incomplete 2:20PM 2:40PM 202401039 sofiafperez@example.com Btech ICT 9012345678 9012345678 9012345678 dummy_skype_id_39 ghi tech LPA 0 1 0 0 0
12 Sofia Perez 08/06/2024 Incomplete 2:20PM 2:40PM 202401039 sofiafperez@example.com Btech ICT 9012345678 9012345678 9012345678 dummy_skype_id_39 ghi tech LPA 1 0 0 0 0
1 Ella Sanchez 18/06/2024 Complete 8:40AM 9:00AM 202401041 ellasantacruz@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_41 ghi tech 7 LPA 0 0 0 0 1
1 Ella Sanchez 18/06/2024 Complete 8:40AM 9:00AM 202401041 ellasantacruz@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_41 ghi tech LPA 0 0 0 1 0
1 Ella Sanchez 18/06/2024 Complete 8:40AM 9:00AM 202401041 ellasantacruz@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_41 ghi tech LPA 0 0 1 0 0
1 Ella Sanchez 18/06/2024 Complete 8:40AM 9:00AM 202401041 ellasantacruz@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_41 ghi tech LPA 0 1 0 0 0
1 Ella Sanchez 18/06/2024 Complete 8:40AM 9:00AM 202401041 ellasantacruz@example.com Btech ICT 1234567890 1234567890 1234567890 dummy_skype_id_41 ghi tech LPA 1 0 0 0 0
3 Avery Howard 12/06/2024 Complete 1:25PM 1:45PM 202401043 ahoward@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_43 ghi tech 7 LPA 0 0 0 0 1
3 Avery Howard 12/06/2024 Complete 1:25PM 1:45PM 202401043 ahoward@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_43 ghi tech LPA 0 0 1 0 0
3 Avery Howard 12/06/2024 Complete 1:25PM 1:45PM 202401043 ahoward@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_43 ghi tech LPA 0 1 0 0 0
3 Avery Howard 12/06/2024 Complete 1:25PM 1:45PM 202401043 ahoward@example.com Btech ICT 3456789012 3456789012 3456789012 dummy_skype_id_43 ghi tech LPA 1 0 0 0 0
5 Jacob Diaz 14/06/2024 Incomplete 5:45PM 6:05PM 202401045 jacobdiaz@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_45 ghi tech 7 LPA 0 0 0 0 1
5 Jacob Diaz 14/06/2024 Incomplete 5:45PM 6:05PM 202401045 jacobdiaz@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_45 ghi tech LPA 0 0 0 1 0
5 Jacob Diaz 14/06/2024 Incomplete 5:45PM 6:05PM 202401045 jacobdiaz@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_45 ghi tech LPA 0 0 1 0 0
5 Jacob Diaz 14/06/2024 Incomplete 5:45PM 6:05PM 202401045 jacobdiaz@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_45 ghi tech LPA 0 1 0 0 0
5 Jacob Diaz 14/06/2024 Incomplete 5:45PM 6:05PM 202401045 jacobdiaz@example.com Btech ICT 5678901234 5678901234 5678901234 dummy_skype_id_45 ghi tech LPA 1 0 0 0 0
7 Noah Ward 16/06/2024 Complete 9:55AM 10:15AM 202401047 noahward@example.com Btech ICT 7890123456 7890123456 7890123456 dummy_skype_id_47 ghi tech 7 LPA 0 0 0 0 1
7 Noah Ward 16/06/2024 Complete 9:55AM 10:15AM 202401047 noahward@example.com Btech ICT 7890123456 7890123456 7890123456 dummy_skype_id_47 ghi tech LPA 0 0 0 1 0
7 Noah Ward 16/06/2024 Complete 9:55AM 10:15AM 202401047 noahward@example.com Btech ICT 7890123456 7890123456 7890123456 dummy_skype_id_47 ghi tech LPA 0 0 1 0 0
7 Noah Ward 16/06/2024 Complete 9:55AM 10:15AM 202401047 noahward@example.com Btech ICT 7890123456 7890123456 7890123456 dummy_skype_id_47 ghi tech LPA 0 1 0 0 0
7 Noah Ward 16/06/2024 Complete 9:55AM 10:15AM 202401047 noahward@example.com Btech ICT 7890123456 7890123456 7890123456 dummy_skype_id_47 ghi tech LPA 1 0 0 0 0
9 Elijah Roberts 18/06/2024 Incomplete 2:30PM 2:50PM 202401049 elijahroberts@example.com Btech ICT 9012345678 9012345678 9012345678 dummy_skype_id_49 ghi tech LPA 0 0 0 1 0
9 Elijah Roberts 18/06/2024 Incomplete 2:30PM 2:50PM 202401049 elijahroberts@example.com Btech ICT 9012345678 9012345678 9012345678 dummy_skype_id_49 ghi tech LPA 0 1 0 0 0
9 Elijah Roberts 18/06/2024 Incomplete 2:30PM 2:50PM 202401049 elijahroberts@example.com Btech ICT 9012345678 9012345678 9012345678 dummy_skype_id_49 ghi tech LPA 1 0 0 0 0
```

SWITCH CASE 5 OUTPUT:-

```
> ✘ TERMINAL
⚠ PS C:\Users\M.P\OneDrive\Desktop\OOPS> cd "c:\Users\M.P\OneDrive\Desktop\Capstone\" ; if (?) { g++ Version_13.cpp -o Version_13 } ; if (?) { .\Version_13 }
1. Search a student placement data using 'Student name'.
2. Search a student placement data using 'Student ID'.
3. Search students placement data using 'Company name'.
4. Search students placement data using 'Branch'.
5. Sort the data of students according to their 'Student ID'.
6. Sort the data of students according to the 'package'
7. Find mean and median of the placement
8. Find the maximum and minimum package in the placement
9. Find the acceptance rate of a particular company
10. Find the trajectory of a particular company
11. Print Companies offering Dream and Super Dream Packages
12. Exit/Don't want to perform any operation
Enter the number of operation which you want to perform: 5

2 Jane Smith 02/05/2024 Incomplete 10:30AM 10:50AM 202400002 janessmith@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_2 Fermat Commerce LPA 0 0 0 1 0
2 Jane Smith 02/05/2024 Incomplete 10:30AM 10:50AM 202400002 janessmith@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_2 Fermat Commerce LPA 0 0 1 0 0
2 Jane Smith 02/05/2024 Incomplete 10:30AM 10:50AM 202400002 janessmith@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_2 Fermat Commerce LPA 0 1 0 0 0
2 Jane Smith 02/05/2024 Incomplete 10:30AM 10:50AM 202400002 janessmith@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_2 Fermat Commerce LPA 1 0 0 0 0
4 Emily Brown 04/05/2024 Incomplete 3:45PM 4:05PM 202400004 emilybrown@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_4 Fermat Commerce LPA 0 0 1 0 0
4 Emily Brown 04/05/2024 Incomplete 3:45PM 4:05PM 202400004 emilybrown@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_4 Fermat Commerce LPA 0 1 0 0 0
4 Emily Brown 04/05/2024 Incomplete 3:45PM 4:05PM 202400004 emilybrown@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_4 Fermat Commerce LPA 1 0 0 0 0
6 Sophia Anderson 06/05/2024 Complete 7:10AM 7:30AM 202400005 sophiaanderson@example.com Mtech ICT 6789012345 6789012345 6789012345 dummy_skype_id_6 Fermat Commerce LPA 1 0 0 0 0
8 Olivia Garcia 08/05/2024 Incomplete 11:55AM 12:15PM 202400008 oliviagarcia@example.com Mtech ICT 8901234567 8901234567 8901234567 dummy_skype_id_8 Fermat Commerce LPA 1 0 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400012 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 abc pvt ltd. 21 LPA 0 0 0 0 1
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400012 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 abc pvt ltd. LPA 0 0 0 1 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400012 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 abc pvt ltd. LPA 0 0 1 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400012 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 abc pvt ltd. LPA 0 1 0 0 0
2 Emma Martinez 12/05/2024 Incomplete 10:35AM 10:55AM 202400012 emmamartinez@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_12 abc pvt ltd. LPA 1 0 0 0 0
4 Isabella Rodriguez 14/05/2024 Incomplete 3:50PM 4:10PM 202400014 isabellarodriguez@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_14 abc pvt ltd. LPA 0 1 0 0 0
4 Isabella Rodriguez 14/05/2024 Incomplete 3:50PM 4:10PM 202400014 isabellarodriguez@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_14 abc pvt ltd. LPA 1 0 0 0 0
6 Charlotte Perez 16/05/2024 Complete 7:15AM 7:35AM 202400016 charlotteperez@example.com Mtech ICT 6789012345 6789012345 6789012345 dummy_skype_id_16 abc pvt ltd. LPA 1 0 0 0 0
2 Logan Adams 22/05/2024 Incomplete 10:25AM 10:45AM 202400022 loganadams@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_22 def l1p. 8 LPA 0 0 0 0 1
2 Logan Adams 22/05/2024 Incomplete 10:25AM 10:45AM 202400022 loganadams@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_22 def l1p. LPA 0 0 0 1 0
2 Logan Adams 22/05/2024 Incomplete 10:25AM 10:45AM 202400022 loganadams@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_22 def l1p. LPA 0 0 1 0 0
2 Logan Adams 22/05/2024 Incomplete 10:25AM 10:45AM 202400022 loganadams@example.com Mtech ICT 2345678901 2345678901 2345678901 dummy_skype_id_22 def l1p. LPA 0 1 0 0 0
4 Lincoln Mitchell 24/05/2024 Incomplete 3:35PM 3:55PM 202400024 lincolnmitchell@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_24 def l1p. LPA 0 0 0 1 0
4 Lincoln Mitchell 24/05/2024 Incomplete 3:35PM 3:55PM 202400024 lincolnmitchell@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_24 def l1p. LPA 0 0 1 0 0
4 Lincoln Mitchell 24/05/2024 Incomplete 3:35PM 3:55PM 202400024 lincolnmitchell@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_24 def l1p. LPA 0 1 0 0 0
4 Lincoln Mitchell 24/05/2024 Incomplete 3:35PM 3:55PM 202400024 lincolnmitchell@example.com Mtech ICT 4567890123 4567890123 4567890123 dummy_skype_id_24 def l1p. LPA 1 0 0 0 0
```

