Name:- Haider Ali

Sap ID:- 53109

Subject:- DSA

```cpp
#include <iostream>
using namespace std;
class Node {
public:
 string name;
 int sapID;
 Node* next;

 Node(string name, int sapID) {
 this->name = name;
 this->sapID = sapID;
 this->next = NULL;
 }
};
class LinkedList {
 Node* head;
public:
 LinkedList() { head = NULL; }

 void insertStudent(string name, int sapID) {
 Node* newNode = new Node(name, sapID);
 if (!head) {
 head = newNode;
 return;
```

```cpp
}
Node* temp = head;
while (temp->next != NULL)
temp = temp->next;
temp->next = newNode;
}

void deleteStudent(int pos) {
if (!head) {
cout << "List is empty" << endl;
return;
}
Node* temp = head;
if (pos == 1) {
head = head->next;
delete temp;
return;
}
Node* prev = NULL;
while (pos-- > 1 && temp) {
prev = temp;
temp = temp->next;
}
if (temp) {
prev->next = temp->next;
delete temp;
}
}
void printList() {
```

```cpp
        Node* temp = head;
        while (temp != NULL) {
            cout << "Name: " << temp->name << ", SAP ID: " << temp->sapID << endl;
            temp = temp->next;
        }
    }
};
int main() {
    LinkedList list;
    string name;
    int sapID;
    // Input at least 5 students
    for (int i = 0; i < 5; ++i) {
        cout << "Enter name of student " << i + 1 << ": ";

        if (i == 0) {
            cin.ignore();
        }
        getline(cin, name);
        cout << "Enter SAP ID of student " << i + 1 << ": ";
        cin >> sapID;
        cin.ignore();
        list.insertStudent(name, sapID);
    }

    list.deleteStudent(2);
    list.deleteStudent(4);
    cout << "\nRemaining students:\n";
    list.printList();
```

return 0;

}


```cpp
67     for (int i = 0; i < 5; ++i) {
68         cout << "Enter name of student " << i + 1 << ": ";
69
70         if (i == 0) {
71             cin.ignore();
72         }
73         getline(cin, name);
74         cout << "Enter SAP ID of student " << i + 1 << ": ";
75         cin >> sapID;
76         cin.ignore();
77         list.insertStudent(name, sapID);
78     }
79
80     list.deleteStudent(2);
81     list.deleteStudent(4);
82     cout << "\nRemaining students:\n";
83     list.printList();
84     return 0;
85 }
```

Output:

```
/tmp/V2OQhrGa7S.o
Enter name of student 1: asif
Enter SAP ID of student 1: 53109
Enter name of student 2: Ali
Enter SAP ID of student 2: 2223
Enter name of student 3: Saiid
Enter SAP ID of student 3: 34445
Enter name of student 4: Asa'd
Enter SAP ID of student 4: 44567
Enter name of student 5: Haiders
Enter SAP ID of student 5: 8876

Remaining students:
Name: sif, SAP ID: 53109
Name: Saiid, SAP ID: 34445
Name: Asa'd, SAP ID: 44567


=== Code Execution Successful ===
```