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1 // Question_2.cpp : This file contains the 'main' function. Program execution begins and ends there.
2 //
3 //
4 // /
5 //-----
6 //Name Sai Chaitanya Kilambi
7 //Course CPSC 131 Data Structures, Fall, 2022
8 //Assignment No.7 question:2
9 //Due date 10/18/2022
10 // Purpose:
11 // This prints the elements in a linked list and also outputs the name of
    max
12 //-----
13 // list of libraries
14 //
15 //importing the required libraries
16 #include<iostream>
17 #include<string>
18 #include<fstream>
19 using namespace std;
20
21 //define the node
22 struct node {
23     string name;
24     int age;
25     node* next;
26 };
27
28 //function to output the max element
29 void largestElement(struct node* head)
30 {
31     //assigning the first element of the linked list to max variable
32     int max = head->age;
33     string name;
34
35     //loop to check the max value of each element in the linked list
36     while (head != NULL) {
37
38         if (max < head->age) {
39             max = head->age;
40             name = head->name;
41
42         }
43         head = head->next;
44     }
45     cout<<"The oldest person is "<<name;
```

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46 }
47
48 //function to display the linked list
49 void display(node* head) {
50
51     node* p = head;
52     cout << "Name   " << "Age" << endl;
53     cout << "-----\n";
54     while (p != nullptr) {
55         cout << p->name << "\t" << p->age << endl;
56         p = p->next;
57     }
58 }
59
60
61 int main() {
62
63     // defining the node
64     node* head = nullptr;
65
66     //opening the file
67     char filename[] = "pro5.txt";
68     ifstream infile(filename);
69     string name;
70     int age;
71
72     //copying the data from the file to the linked list
73     while (infile >> name >> age) {
74         node* n = new node;
75         n->name = name;
76         n->age = age;
77         n->next = nullptr;
78         if (head == nullptr) {
79             head = n;
80
81         }
82         else {
83             n->next = head;
84             head = n;
85         }
86
87     }
88
89     //closing the file
90     infile.close();
91
92     //calling the display function
93     display(head);
94 }
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95     //calling the function to output the max element
96     largestElement(head);
97
98     return 0;
99 }
100
```