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QUESTION:

Store the information of the students for the attendance and display it ,input should be given as presentees for today’s class , search for the students and display the prsentees in a class write a c modular code for it??

SOLUTION:

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

struct Student {

int rollNumber;

char name[50];

int isPresent;

struct Student\* next;

};

struct Student\* createNode(int rollNumber, char name[]) {

struct Student\* newNode = (struct Student\*)malloc(sizeof(struct Student));

newNode->rollNumber = rollNumber;

strcpy(newNode->name, name);

newNode->isPresent = 0;

newNode->next = NULL;

return newNode;

}

void insertStudent(struct Student\*\* head, struct Student\* newNode) {

if (\*head == NULL) {

\*head = newNode;

} else {

struct Student\* temp = \*head;

while (temp->next != NULL) {

temp = temp->next;

}

temp->next = newNode;

}

}

void displayList(struct Student\* head) {

struct Student\* temp = head;

while (temp != NULL) {

printf("Roll Number: %d, Name: %s, Present: %s\n",

temp->rollNumber, temp->name, temp->isPresent ? "Yes" : "No");

temp = temp->next;

}

}

void displayPresentees(struct Student\* head) {

struct Student\* temp = head;

printf("List of Presentees:\n");

while (temp != NULL) {

if (temp->isPresent) {

printf("Roll Number: %d, Name: %s\n", temp->rollNumber, temp->name);

}

temp = temp->next;

}

}

int main() {

struct Student\* head = NULL;

int numStudents, i;

printf("Enter the number of students present today: ");

if (scanf("%d", &numStudents) != 1) {

printf("Invalid input. Exiting the program.\n");

return 1;

}

for (i = 0; i < numStudents; i++) {

int rollNumber;

char name[50];

printf("\nStudent %d:\n", i + 1);

printf("Enter Roll Number: ");

if (scanf("%d", &rollNumber) != 1) {

printf("Invalid input. Exiting the program.\n");

return 1;

}

printf("Enter Name: ");

if (scanf("%s", name) != 1) {

printf("Invalid input. Exiting the program.\n");

return 1;

}

struct Student\* newNode = createNode(rollNumber, name);

insertStudent(&head, newNode);

}

displayList(head);

printf("\nMark Presentees:\n");

struct Student\* temp = head;

while (temp != NULL) {

printf("Is student %d (%s) present? (1 for Yes, 0 for No): ", temp->rollNumber, temp->name);

if (scanf("%d", &temp->isPresent) != 1) {

printf("Invalid input. Exiting the program.\n");

return 1;

}

temp = temp->next;

}

displayPresentees(head);

return 0;

}

