Lab work 01.10.2025

Question 2:

#include <stdio.h>

int main()

{

    int arr[100], n, i;

    int largest, second;

    printf("Enter number of elements: ");

    scanf("%d", &n);

    printf("Enter %d elements:\n", n);

    for (i = 0; i < n; i++)

    {

        scanf("%d", &arr[i]);

    }

    largest = arr[0];

    for (i = 1; i < n; i++)

    {

        if (arr[i] > largest)

        {

            largest = arr[i];

        }

    }

    second = -1;

    for (i = 0; i < n; i++)

    {

        if (arr[i] != largest)

        {

            if (second == -1 || arr[i] > second)

            {

                second = arr[i];

            }

        }

    }

    printf("The second largest element is: %d\n", second);

    return 0;

}

A screen shot of a computer program

AI-generated content may be incorrect.

Question 3 :

#include <stdio.h>

int sum(int n)

{

    if (n == 0)

    {

        return 0;

    }

    else

    {

        return (n % 10) + sum(n / 10);

    }

}

int main()

{

    int num, result;

    printf("Enter a number: ");

    scanf("%d", &num);

    if (num < 0)

    {

        num = -num;

    }

    result = sum(num);

    printf("Sum of digits: %d\n", result);

    return 0;

}

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AI-generated content may be incorrect.

Question 4 :

    printf("Enter two numbers: ");

    scanf("%d %d", &a, &b);

    printf("Before swapping: %d %d\n", a, b);

    swap(&a, &b);

    printf("After swapping: %d %d\n", a, b);

    return 0;

}

A screen shot of a computer program

AI-generated content may be incorrect.

Question 6 :

#include <stdio.h>

struct student {

    char name[50];

    int roll\_number;

    float marks ;

}stu;

int main() {

    printf("Enter student name: ");

    scanf("%d", &stu.name);

    printf("Enter student roll number : ");

    scanf("%d", &stu.roll\_number);

    printf("Enter marks obtained by student : ");

    scanf("%f", &stu.marks);

    printf("\n Student Details:\n");

    printf("Name of student: %s\n", stu.name);

    printf("roll number: %d\n", stu.roll\_number);

    printf("marks obtained : %.1f\n", stu.marks);

    return 0;

}

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AI-generated content may be incorrect.

Question 7:

#include <stdio.h>

struct Employee {

    int id;

    char name[50];

    float basic\_payment;

    float da;

    float hra;

    float gross;

}Employee;

struct Employee inputEmployee()

{

    struct Employee e;

    float da\_percentage, hra\_percentage;

    printf("Enter Employee ID: ");

    scanf("%d", &e.id);

    printf("Enter Employee Name: ");

    scanf(" %s[^\n]", e.name);

    printf("Enter Basic Pay: ");

    scanf("%f", &e.basic\_payment);

    printf("Enter DA (in percentage): ");

    scanf("%f", &da\_percentage);

    printf("Enter HRA (in percentage): ");

    scanf("%f", &hra\_percentage);

    e.da = (da\_percentage / 100.0f) \* e.basic\_payment;

    e.hra = (hra\_percentage / 100.0f) \* e.basic\_payment;

    return e;

}

float total\_Salary(float basic, float da, float hra)

{

    return basic + da + hra;

}

void displayEmployee(struct Employee e) {

    printf("\nEmployee Details:\n");

    printf("ID: %d\n", e.id);

    printf("Name: %s\n", e.name);

    printf("Basic Pay: %.2f\n", e.basic\_payment);

    printf("DA: %.2f\n", e.da);

    printf("HRA: %.2f\n", e.hra);

    printf("Gross Salary: %.2f\n", e.gross);

}

int main() {

    struct Employee emp;

    emp = inputEmployee();

    emp.gross = total\_Salary(emp.basic\_payment, emp.da, emp.hra);

    displayEmployee(emp);

    return 0;

}

A screenshot of a computer program

AI-generated content may be incorrect.