LAB 03

Task:1 Explain the output of this C program. Why the wrong value is being displayed in the output?

Ans: data type int has range of 2147483648 to 2147483647 so the given integer is out of range that’s why answer is not same while running the code.

Task:2 Write a C program that finds the largest of three numbers entered by the user.

#include <stdio.h>

int main() {

int x,y,z;

printf("Enter your number 1 \n");

scanf("%d", &x);

printf("Enter your number 2 \n");

scanf("%d", &y);

printf("Enter your number 3 \n");

scanf("%d", &z);

if (x > y && x > z) {

printf("greatest from others is %d", x);

} else if (y > x && y > z) {

printf("greatest from others is %d", y);

} else {

printf("greatest from others is %d", z);

}

}

Tasl:3 A travel agency asks you to develop a program in C that can convert an amount from one currency to another. The user should input the amount in their local currency and the conversion rate for the desired foreign currency. The program should then output the equivalent amount in the foreign currency.

#include <stdio.h>

int main() {

float amountInLocalCurrency;

float conversionRate;

float amountInForeignCurrency;

printf("Enter the amount in local currency: ");

scanf("%f", &amountInLocalCurrency);

printf("Enter the conversion rate of dollar: ");

scanf("%f", &conversionRate);

amountInForeignCurrency = amountInLocalCurrency / conversionRate;

printf("Equivalent amount in foreign currency: %f\n", amountInForeignCurrency);

}

Task: 4 Write a C program that determines whether a number provided by the user is even or odd.

#include <stdio.h>

int main() {

int x;

printf("Enter your number \n");

scanf("%d", &x);

if (x % 2== 0) {

printf("number is even");

} else {

printf("number is odd");

}

}

Task:5 Write a C program to calculate the discounted price of an item based on original price between Rs.100 and Rs. 50,000. Discount rate between 5% and 30%. Calculate the final price after applying the discount. Validate inputs and provide error messages if they are out of range.Display the final price after discount.Final Price = Original Price \* (1 – Discount Rate / 100)

#include <stdio.h>

int main() {

float price,discount,finalPrice;

printf("Enter your original price: ");

scanf("%f", &price);

printf("Enter your discount%: ");

scanf("%f", &discount);

if (price >= 100 && price <= 50000) {

finalPrice = price \* (1- discount/100);

printf("your discount is %.3f", finalPrice);

}

else if (discount < 5 && price > 30) {

printf("discount is out of range");

} else {

printf("amount is out of range");

}

}

Task:6 Write a C program to calculate the volume of a cylinder given its radius and height. Use the formula: Volume = π r2 h where π is approximately 3.14159. Format the result to 3 decimal places.

#include <stdio.h>

int main() {

int radius,height;

printf("Enter cylinder radius \n");

scanf("%d", &radius);

printf("Enter cylinder height \n");

scanf("%d", &height);

double pi = 3.14159;

double volume = pi\*(radius\*radius)\*height;

printf("volume is: %.4lf", volume) ;

}