BL.SC.U4AIE24015

Q1

#include<stdio.h>

int welcome() //Function definition

{

printf("Welcome to C\n");}

int main()

{ printf("Before welcome\n");

welcome(); //Function Call

printf("after welcome\n");

}

Q2

#include<stdio.h>

int square(int);

int main()

{

int num, res;

printf("Enter a number\n");

scanf("%d", &num);

res=square(num);

printf("Square of %d = %d", num, res);

}

int square(int x)

{

return (x\*x);

}

Q3

#include<stdio.h>

void Sum() {

int x = 5;

int y = 10;

int sum = x + y;

printf("The sum of x + y is: %d", sum);

}int main() {

Sum(); // call the function

return 0;

}

Q3a

#include <stdio.h>

int add () {

int a, b;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

return a + b;

}int main() {

int sum = add ();

printf("Sum is: %d\n", sum);

return 0;

}

Q3b

#include <stdio.h>

int add () {

int a, b;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

return a + b;

}int main() {

int sum = add ();

printf("Sum is: %d\n", sum);

return 0;

}

Q3c

#include <stdio.h>

void add (int a, int b) {

printf("Sum is: %d\n", a + b);

}

int main() {

int a, b;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

add (a, b);

return 0;

}

Q3d

#include <stdio.h>

int add (int a, int b) {

return a + b;

}

int main() {

int a, b;

printf("Enter two numbers: ");

scanf("%d %d", &a, &b);

int sum = add (a, b);

printf("Sum is: %d\n", sum);

return 0;

}

Q5

#include <stdio.h>

void area() {

int a, area, peri;

printf("Enter side length: ");

scanf("%d", &a);

area = a \* a;

peri = 4 \* a;

printf("Area of the square is: %d\n", area);

printf("Perimeter of the square is: %d\n", peri);

}

int main() {

area();

return 0;

}

Q6

#include <stdio.h>

// Function to find the maximum of three numbers

int maxOfThree(int num1, int num2, int num3) {

int max = num1; // Assume num1 is the largest

if (num2 > max) {

max = num2; // Update max if num2 is larger

}

if (num3 > max) {

max = num3; // Update max if num3 is larger

}

return max;

}

int main() {

int a, b, c;

printf("Enter three numbers: ");

scanf("%d %d %d", &a, &b, &c);

int maximum = maxOfThree(a, b, c);

printf("The maximum of the three numbers is: %d\n", maximum);

return 0;

}

Q7

#include <stdio.h>

void evenOdd(int x) {

if (x % 2 == 0) {

printf("%d is even.\n", x);

} else {

printf("%d is odd.\n", x);

}}

int main() {

int num;

printf("Enter an integer: ");

scanf("%d", &num);

evenOdd(num);

return 0;

}

Q8

#include <stdio.h>

void positivevalue(int x) {

if (x < 0) {

x = -x; // Convert x to positive if it's negative

}

printf("The absolute value is: %d\n", x);

}

int main() {

int num;

printf("Enter a number: ");

scanf("%d", &num);

positivevalue (num);

return 0;

}

Q11

#include <stdio.h>

float add(float a, float b) {

return a + b;

}

float subtract(float a, float b) {

return a - b;

}

float multiply(float a, float b) {

return a \* b;

}

float divide(float a, float b) {

if (b != 0) {

return a / b;

} else {

printf("Error: Division by zero is not allowed.\n");

return 0;

}}

int main() {

float num1, num2, result;

char operator;

printf("Enter first number: ");

scanf("%f", &num1);

printf("Enter an operator (+, -, \*, /): ");

scanf(" %c", &operator);

printf("Enter second number: ");

scanf("%f", &num2);

switch (operator) {

case '+':

result = add(num1, num2);

printf("Result: %.2f\n", result);

break;

case '-':

result = subtract(num1, num2);

printf("Result: %.2f\n", result);

break;

case '\*':

result = multiply(num1, num2);

printf("Result: %.2f\n", result);

break;

case '/':

result = divide(num1, num2);

if (num2 != 0) {

printf("Result: %.2f\n", result);

}

break;

default:

printf("Error: Invalid operator.\n");

break;

} return 0;

}

Q13

#include <stdio.h>

void decimalToBinary(int n) {

int binary[32];

int index = 0;

if (n == 0) {

printf("Binary representation: 0\n");

return;

}

while (n > 0) {

binary[index] = n % 2; // Store remainder

n = n / 2; // Divide by 2

index++;

}

printf("Binary representation: ");

for (int i = index - 1; i >= 0; i--) {

printf("%d", binary[i]);

}

printf("\n");

}

int main() {

int num;

printf("Enter a decimal number: ");

scanf("%d", &num);

decimalToBinary(num);

return 0;

}

Q14

#include <stdio.h>

#include <stdbool.h>

bool isPrime(int n) {

if (n <= 1) {

return false; // 0 and 1 are not prime numbers

}

for (int i = 2; i \* i <= n; i++) { // Check up to the square root of n

if (n % i == 0) {

return false; // n is divisible by i, hence not prime

}

}

return true; // n is prime

}

int main() {

int num;

printf("Enter a number: ");

scanf("%d", &num);

if (isPrime(num)) {

printf("%d is a prime number.\n", num);

} else {

printf("%d is not a prime number.\n", num);

}

return 0;

}