Home work .

Create a c program for ten question

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// #1 Print your name, date of birth, and mobile number

#include <stdio.h>

int main() {

// Print name

printf("Name: Mohammad Inkawi\n");

// Print date of birth

printf("DoB: October 4, 2003\n");

// Print mobile number

printf("Mobile#: 0594589630\n");

return 0;

}

// #2 Print the reverse of certain characters

#include <stdio.h>

int main() {

// Define characters

char c1 = 'X', c2 = 'M', c3 = 'L';

// Print original characters

printf("Characters: '%c', '%c', '%c'\n", c1, c2, c3);

// Print reverse of characters

printf("The reverse of XML is %c%c%c\n", c3, c2, c1);

return 0;

}

// #3 Compute the perimeter and area of a rectangle with a length of 10 cm and width of 5 cm.

//Expected Output:

//Perimeter of the rectangle = 30 cm

//Area of the rectangle = 50 square cm

#include <stdio.h>

int main() {

// Declare variables for length, width, perimeter, and area

int length = 10;

int width = 5;

int perimeter, area;

// Calculate perimeter and area

perimeter = 2 \* (length + width);

area = length \* width;

// Print results

printf("Perimeter of the rectangle = %d cm\n", perimeter);

printf("Area of the rectangle = %d square cm\n", area);

return 0;

}

// #4. compute the perimeter and area of a circle with a radius of 10 cm. Recall that Pie (π) is about

3.14.

#include <stdio.h>

int main() {

// Declare variables for radius, perimeter, and area

float radius = 10.0;

float perimeter, area;

float pi = 3.14;

// Calculate perimeter and area

perimeter = 2 \* pi \* radius;

area = pi \* radius \* radius;

// Print results

printf("Perimeter of the circle = %.2f cm\n", perimeter);

printf("Area of the circle = %.2f square cm\n", area);

return 0;

}

//#5. Declare the following variables then perform the given operations;

Variable declaration :

int a = 125, b = 12345;

long ax = 1234567890;

short s = 4043;

float x = 2.13459;

double dx = 1.1415927;

char c = 'W';

Perform and print out the following operations:

a+ c, x + c, dx + x, ((int) dx) + ax, a + x, s + b, ax + b, s + c, ax + c, the decimal value of c.

#include <stdio.h>

int main() {

// Declare variables

int a = 125, b = 12345;

long ax = 1234567890;

short s = 4043;

float x = 2.13459;

double dx = 1.1415927;

char c = 'W';

// Perform and print operations

printf("a + c = %d\n", a + c);

printf("x + c = %.5f\n", x + c);

printf("dx + x = %.7f\n", dx + x);

printf("((int) dx) + ax = %ld\n", ((int) dx) + ax);

printf("a + x = %.5f\n", a + x);

printf("s + b = %d\n", s + b);

printf("ax + b = %ld\n", ax + b);

printf("s + c = %d\n", s + c);

printf("ax + c = %ld\n", ax + c);

printf("Decimal value of c = %d\n", c);

return 0;

}

//#6. Find the maximum of three different integers. Use scanf to enter values such as:

printf("\n Enter the first integer: ");

scanf("%d", &x); // where &x means the value of variable x

#include <stdio.h>

int main() {

int num1, num2, num3;

printf("Enter the first integer: ");

scanf("%d", &num1);

printf("Enter the second integer: ");

scanf("%d", &num2);

printf("Enter the third integer: ");

scanf("%d", &num3);

int max = num1;

if (num2 > max) {

max = num2;

}

if (num3 > max) {

max = num3;

}

printf("The maximum number is: %d\n", max);

return 0;

}

//#7. Print all even numbers between 1 and 20, then calculate its average

#include <stdio.h>

int main() {

int sum = 0;

int count = 0;

printf("Even numbers between 1 and 20: ");

for (int i = 2; i <= 20; i += 2) {

printf("%d ", i);

sum += i;

count++;

}

double average = (double)sum / count;

printf("\nAverage: %.2f\n", average);

return 0;

}

//#8. Two-Dimensional Array; Input some values. Find the highest value and the input position

Test Data:

Input 5 integers:

5

7

15

45

23

Expected Output:

Highest value: 45

Position: 4

#include <stdio.h>

int main() {

int arr[5];

int max = 0;

int position = 0;

printf("Input 5 integers:\n");

for (int i = 0; i < 5; i++) {

scanf("%d", &arr[i]);

if (arr[i] > max) {

max = arr[i];

position = i + 1;

}

}

printf("Highest value: %d\n", max);

printf("Position: %d\n", position);

return 0;

}

//#9. Write code that would calculate the average Intro to CE marks of some students. Input 0

(excluding to calculate the average) or a negative value to terminate the input process. Hint, use

the following if-break to terminate:

if(marks[i] <= 0) {

break;

#include <stdio.h>

#define MAX\_MARKS 100

int main() {

int marks[MAX\_MARKS];

int i, count;

int sum = 0;

double average;

printf("Enter the Intro to CE marks of the students (enter 0 or negative value to terminate):\n");

for (i = 0; i < MAX\_MARKS; i++) {

printf("Enter mark for student %d: ", i + 1);

scanf("%d", &marks[i]);

if (marks[i] <= 0) {

break;

}

sum += marks[i];

}

count = i;

average = (double)sum / count;

printf("Average Intro to CE marks: %.2f\n", average);

return 0;

}

//#10. Perform the bitwise logical operations; AND, OR, XOR on two 8-bit binary inputs. Print the

output in both binary and hexadecimal.

#include <stdio.h>

int main() {

unsigned char input1, input2;

unsigned char result\_and, result\_or, result\_xor;

// Get the first 8-bit binary number from the user

printf("Enter the first 8-bit binary number: ");

scanf("%hhu", &input1);

// Get the second 8-bit binary number from the user

printf("Enter the second 8-bit binary number: ");

scanf("%hhu", &input2);

// Perform bitwise AND operation

result\_and = input1 & input2;

// Perform bitwise OR operation

result\_or = input1 | input2;

// Perform bitwise XOR operation

result\_xor = input1 ^ input2;

// Print the results in binary and hexadecimal format

printf("AND result (binary): %hhu\n", result\_and);

printf("AND result (hexadecimal): %hhX\n", result\_and);

printf("OR result (binary): %hhu\n", result\_or);

printf("OR result (hexadecimal): %hhX\n", result\_or);

printf("XOR result (binary): %hhu\n", result\_xor);

printf("XOR result (hexadecimal): %hhX\n", result\_xor);

return 0;

}