Assignment - 2 | By: Syed Ammar Ahmed, 03312049042

# Source Code:

// Assignment # 2

// Made by: Syed Ammar Ahmed, 03312049042

void main() {

print("Assignment # 2");

print("By: Syed Ammar Ahmed, 03312049042");

// Task # 1

print('\nTask # 1.1');

print('----------');

// Take XY coordinate and determine in which quadrant the coordinate point lies.

double x = 0;

double y = -4;

print("x = $x");

print("y = $y");

determineQuadrant(x, y);

print('\nTask # 1.2');

print('----------');

// Take three numbers and find a maximum between three numbers.

double num1, num2, num3;

num1 = 012.5;

num2 = 12.2;

num3 = 12.7;

double max = findMax(num1, num2, num3);

print('The maximum number among $num1, $num2, and $num3 is $max');

// Task # 2

print('\nTask # 2.1');

print('----------');

// Print the multiplication table of a number till 10.

int tableOf = 4;

for (int i = 1; i <= 10; i++) {

print('$tableOf x $i = ${tableOf \* i}');

}

print('\nTask # 2.2');

print('----------');

// Calculate the sum of first 20 Odd numbers.

int oddSum = 0;

for (int i = 1; i <= 20; i++) {

if (i % 2 != 0) {

oddSum += i;

}

}

print("Sum of Odd Numbers till 20: $oddSum");

print('\nTask # 2.3');

print('----------');

// Calculate the factorial of a number.

int num = 5;

int factorial = 1;

int loopNum = num;

for (int i = 1; i <= loopNum; loopNum--) {

factorial \*= loopNum;

}

print("The factorial of $num is $factorial");

print('\nTask # 2.4');

print('----------');

// Check if the given number is prime or composite.

int number = -1;

// Check if the number is prime or composite

if (isPrime(number)) {

print('$number is a prime number.');

} else {

print('$number is a composite number.');

}

}

void determineQuadrant(double x, double y) {

if (x > 0 && y > 0) {

print("The point is in Quadrant 1.");

} else if (x < 0 && y > 0) {

print("The point is in Quadrant 2.");

} else if (x < 0 && y < 0) {

print("The point is in Quadrant 3.");

} else if (x > 0 && y < 0) {

print("The point is in Quadrant 4.");

} else if (x == 0 && y != 0) {

print("The point lies on the y-axis.");

} else if (x != 0 && y == 0) {

print("The point lies on the x-axis.");

} else if (x == 0 && y == 0) {

print("The point is at the origin.");

}

}

// functions

double findMax(a, b, c) {

double high = 0;

if (a > b && a > c) {

high = a;

} else if (b > c && b > a) {

high = b;

} else if (c > a && c > b) {

high = c;

}

return high;

}

bool isPrime(int num) {

if (num <= 1) {

return false;

}

for (int i = 2; i <= num / 2; i++) {

if (num % i == 0) {

return false;

}

}

return true;

}

# Code Output:

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Task # 1.1

----------

x = 0

y = -4

The point lies on the y-axis.

Task # 1.2

----------

The maximum number among 12.5, 12.2, and 12.7 is 12.7

Task # 2.1

----------

4 x 1 = 4

4 x 2 = 8

4 x 3 = 12

4 x 4 = 16

4 x 5 = 20

4 x 6 = 24

4 x 7 = 28

4 x 8 = 32

4 x 9 = 36

4 x 10 = 40

Task # 2.2

----------

Sum of Odd Numbers till 20: 100

Task # 2.3

----------

The factorial of 5 is 120

Task # 2.4

----------

-1 is a composite number.