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18/SCI01/059

Csc206 assignment

1) Using the conditional operator, write a program in c programming language to find if a given character is a consonant or vowel

Solution

#include <stdio.h>

Int main()

{

Char ch;

Printf (“please enter an alphanet: \n”)

Scanf(“%c,&ch);

If (ch==’a’ || ch== ‘e’ || ch==’I’ || ch==’o’|| ch==’u)|| ch==’A’|| ch==’E’ || ch==’I’|| ch==’O’||

Ch==’U’ )

Printf(“\n%c ia vowel.”,ch);}

Else{

Printf(“\n%C is a consonant.”,ch);

}

Return0;

2) Write a program (using FOR statement) that reads an integer and displays its multiplication table. The program should force the user to enter an integer within [1, 10].

int main()

{

int i, Number;

long Factorial = 1;

printf("\n Please Enter any number to Find Factorial\n");

scanf("%d", &Number);

for (i = 1; i <= Number; i++)

{

Factorial = Factorial \* i;

}

printf("\nFactorial of %d = %d\n", Number, Factorial);

return 0;

}

3) Write a program (using FOR statement) that reads an integer and displays its multiplication table. The program should force the user to enter an integer within [1, 10].

#include <stdio.h>

int main() {

int n, i;

printf("Enter an integer: ");

scanf("%d", &n);

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

printf("%d \* %d = %d \n", n, i, n \* i);

}

return 0;

}

4)

Write a program that reads an integer and displays a message to indicate whether it is a prime number or not.

#include <stdio.h>

int main() {

int n, i;

bool isPrime = true;

cout << "Enter a positive integer: ";

cin >> n;

for (i = 2; i <= n / 2; ++i) {

if (n % i == 0) {

isPrime = false;

break;

}

}

if (isPrime)

cout << n << " is a prime number";

else

cout << n << " is not a prime number";

return 0;

}

5) **Write a C program to find the product of 8 integers entered by a user**

#include <stdio.h>

int main() {

int number;

printf("Enter an integer: ");

// reads and stores input

scanf("%d", &number);

// displays output

printf("You entered: %d", number);

return 0;

}

6) Write a program that reads the initial population of a country and its annual population growth (as a percentage).

#include <stdio.h>

int main()

{

int popA, popB, year = 1;

double growth\_rateA, growth\_rateB;

cout << "Enter the population and growth rate of Town A: ";

cin >> popA >> growth\_rateA;

cout << endl;

cout << "Enter the population and growth rate of Town B: ";

cin >> popB >> growth\_rateB;

cout << endl;

if (popA < popB && growth\_rateA > growth\_rateB)

{

{

do {

(popA = ((growth\_rateA / 100) \* popA) + popA); // calculates population growth in one year

(popB = ((growth\_rateB / 100) \* popB) + popB);

year++;

}

while (popA < popB);

cout << "Town A will surpass Town B in population after " << year << " years.\n" << endl;

cout << "The final population of Town A is: " << popA << ".\n" << endl;

cout << "The final population of Town B is: " << popB << ".\n" << endl;

}

}

else

{

cout << "Invalid Data.";

}

system("pause");

return 0;

}

7)