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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)