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18/sci01/055

Csc206

Questions

1. Write a program that count from 100 to 1 varying the control variable in the steps of 3 and printing its square for each count. Using ****For**** statement and ****While**** statement.
2. ****Write a C program to** **display 80 bottles. But, if the input** **exceed 59,** **exit the loop and end the program. (Hint:** using break statement**)****
3. Write a program that reads an integer and displays a message to indicate whether it is a prime number or not. It is reminded that a prime number is any integer greater than 1 with no divisor other than 1 and itself.
4. Write a c program to find factorial of a natural number
5. Write a program in C that count from 50 to 1000 varying the control variable in steps of 7 using ****do While**** statement.
6. Using conditional operator, write a program in C programming Language to find if a given character is a consonant or a vowel.
7. 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].
8. A test consists of 10 multiple choice questions, each of which has three possible answers. The first answer gets three points, the second one point, and the third two points. Write a program that uses the ****switch****statement to read the test taker’s 10 answers and display the final score.
9. ****Write a C program to find the product of** **8** **integers entered by a user. If user enters 0 skip****  ****it.** **(Hint:** using continue statement**)****
10. Write a program that reads the initial population of a country and its annual population growth (as a percentage). Then, the program should read the number of years and display the new population for each year.

Answers

**Question 1**

#include<stdio.h>

int main()

{

   void countFrom100();

   {

       int count, square;

       for(count = 100;count > 0; count--)

{

    square = count\*count;

    printf("%d\n",square);

}    }

return 0;

}

**Question 3**

#include<stdio.h>

int main()

{

   void countFrom100();

   {

       int count, square;

       for(count = 100;count > 0; count--)

{

    square = count\*count;

    printf("%d\n",square);

}    }

return 0;

}

**Question 4**

#include<stdio.h>

int main()

{

   int n, i, fact = 1;

    printf("Enter an integer: ");

    scanf("%d", &n);

    //shows error if the user enters a negative integer

    if(n < 0) {

       printf("Error! Factorial of a negative number doesn't exist.");

    }

    else{

       for (i = 1; i <= n; ++i){

           fact = fact\*i;

           printf("Factorial o f %d = %d", n, fact);

       }

    }

}

**Question 5**

#include<stdio.h>

int main()

{

   int n = 50;

   do{

       printf("n is equal to: %d\n", n);

   n+=7;

   }

   while(n <= 1000);

   return 0;

}

**Question 6**

#include<stdio.h>

int main()

{

   char c;

   printf("Enter any alphabet: ");

   scanf(" %c", &c);

   if(c == 'a' || c == 'e' || c == 'i' || c == 'o' || c == 'u' || c == 'A' || c == 'E' || c == 'I' || c == 'O' || c == 'U')

   {

   printf("\n %c is a vowel", c);

   }

   else{

       printf("%c is a consonant", c);

   }

   return 0;

}

**Question 7**

#include<stdio.h>

int main()

{

   int number, i, final;

   printf("Enter a number to show its multiplication: ");

   scanf("%d", &number);

   for(i = 1; i <= 12; i++){

       final = number\*i;

       printf("\n The multiplication of %d \* %d = %d", number, i, final);

   }

   return 0;

}

**Question 9**

#include<stdio.h>

int main()

{

   int i, number;

   int final = 1;

   for(i = 0; i < 8; i++){

       printf("Enter a number to be multiplied: ");

       scanf("%d", &number);

       if(number == 0){

           continue;

       }

       else{

           final \*= number;

       }

   }

   printf("The final answer is %d", final);

   return 0;

}

**Question 10**

#include<stdio.h>

int main()

{

   int years;

   double pop, growth;

    printf("Enter the population in a year: ");

    scanf("%lf", &pop);

    printf("Enter the annual percentage population growth rate: ");

    scanf("%lf", &growth);

    printf("Enter number of years: ");

    scanf("%d", &years);

    int i = 1;

    for(i = 1; i <= years; i++)

    {

        pop += (pop / 100) \* growth;

        printf("\nYear %d: %2.lf\n", i, pop);

    }

return 0;

}