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CSC206 ASSIGNMENT.

QUESTION ONE

USING WHILE LOOP

#include <stdio.h>

int main()

{

 int count=100, square=10000;

 while (count >= 3&&square>=3)

 {

 printf("%d|%d \n", count,square);

 count=count-3;

 square= count\*count;

 }

 return 0;

}

USING FOR LOOP

#include<stdio.h>

int main()

{

 int i,j;

 for(i=100,j=i\*i;i>=3,j>=3;i=i-3,j=i\*i)

 {

 printf("%d|%d \n",i,j);

 }

 return 0;

}

QUESTION TWO

QUESTION THREE

#include <stdio.h>

int main() {

 int n, i, flag = 0;

 printf("Enter a positive integer: ");

 scanf("%d", &n);

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

 // condition for non-prime

 if (n % i == 0) {

 flag = 1;

 break;

 }

 }

 if (n == 1) {

 printf("1 is neither prime nor composite.");

 }

 else {

 if (flag == 0)

 printf("%d is a prime number.", n);

 else

 printf("%d is not a prime number.", n);

 }

 return 0;

}

QUESTION FOUR

#include <stdio.h>

int main() {

 int n, i;

 int facto = 1;

 printf("Enter an integer: ");

 scanf("%d", &n);

 if (n < 0)

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

 else {

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

 facto \*= i;

 }

 printf("Factorial of %d = %d", n, facto);

 }

 return 0;

}

QUESTION FIVE

#include<stdio.h>

int main()

{

 int j=50;

 do

 {

 printf("%d \n",j);

 j+=7;

 }

 while(j<=1000);

 return 0;

}

QUESTION SIX

#include <stdio.h>

int main() {

 char c;

 int lowercase, uppercase;

 printf("Enter an alphabet: ");

 scanf("%c", &c);

 lowercase = (c == 'a' || c == 'e' || c == 'i' || c == 'o' || c == 'u');

 uppercase = (c == 'A' || c == 'E' || c == 'I' || c == 'O' || c == 'U');

 if (lowercase || uppercase)

 printf("%c is a vowel.", c);

 else

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

 return 0;

}

QUESTION SEVEN

#include <stdio.h>

int main()

{

 int n, i;

 printf("Enter a Number ");

 scanf("%d",&n);

 if(n<=10&&n>=1)

 {

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

 {

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

 }

 }

 else

 {

 printf("Enter a number between 1 and 10");

 }

}

QUESTION EIGHT

QUESTION NINE

#include<stdio.h>

int main()

{

inti, 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 TEN

#include<stdio.h>

int main()

{

int years;

double popul, growth;

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

scanf("%lf", &popul);

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

scanf("%lf", &growth);

printf("Enter number of years: ");

scanf("%d", &years);

inti = 1;

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

 {

popul += (popul / 100) \* growth;

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

 }

return 0;

}