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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;

}