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// ConsoleApplication4.cpp : Defines the entry point for the console application.
//

#include "stdafx.h"
#include <time.h>
#include <stdlib.h>
#include <iostream>

int program1()
{
    int ie = 5;

    std::cout << ie << std::endl;

    std::cin.get();

    return 0;
}

int program2()
{
    int ie = 5;
    int id = 3;
    std::cout << ie << " and " << id << std::endl;

    std::cin.get();

    return 0;
}

int program3()
{
    int tal1, tal2, tal3;
    tal2 = 3; tal1 = 5;
    tal3 = tal1 + tal2;
    std::cout << tal3 <<std::endl;
    std::cout << tal1 << " and " << tal2 <<" equals: " << tal3 << std::endl;

    std::cin.get();

    return 0;
}

int program4()
{
    float tal1;
    tal1 = 4.76f;

    std::cout << tal1 << std::endl;
    std::cin.get();

    return 0;
}

int program5()
{
    float tal1;
    int tal2;
    tal1 = 4.76f;
    tal2 = tal1;

    std::cout << tal2 << std::endl;
    std::cin.get();

    return 0;
}

int program6()
{
    float tal1, tal2;
    tal1 = 0.1f;
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    tal2 = 0.2f;

    std::cout.precision(8);
    std::cout << tal1 + tal2 << std::endl;
    std::cin.get();

    return 0;
}

int program8()
{

    std::cout << 1/2 << std::endl;
    std::cout << 1.0f / 2 << std::endl;
    std::cout << 1 / 2.0f << std::endl;
    std::cin.get();

    return 0;
}

int program9()
{
    float far, cel;
    far = 0;

    std::cout << "enter fahrenheit degree to convert to celsius: ";
    std::cin >> far;

    cel = (far - 32) / (float)1.8000;

    std::cout << cel << std::endl;
    std::cin.ignore();
    std::cin.get();

    return 0;
}

int program10()
{
    int far;
    far = 0;

    std::cout << "enter and integer number: ";
    std::cin >> far;

    std::cout << far * far << std::endl;
    std::cin.ignore();
    std::cin.get();

    return 0;
}

int program11()
{
    int tal1, tal2;
    float tal3;
    tal1 = 0;
    tal2 = 0;
    tal3 = 0.00;

    std::cout << "enter two integer number: ";
    std::cin >> tal1;
    std::cin >> tal2;

    tal3 = (tal1 * tal1) / float(tal2);

    std::cout << tal3 << std::endl;
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    std::cin.ignore();
    std::cin.get();

    return 0;
}

int program12()
{
    float far, cel;
    cel = 0;

    std::cout << "enter Celcius degree to convert to Farenheit: ";
    std::cin >> cel;

    far = (cel * (float)1.8000) + 32;

    std::cout << far << std::endl;
    std::cin.ignore();
    std::cin.get();

    return 0;
}

int program13()
{
    std::cout << "sizeof(long long) : " << sizeof(long long) << std::endl;
    std::cout << "sizeof(int) : " << sizeof(int) << std::endl;
    std::cout << "sizeof(short) : " << sizeof(short) << std::endl;
    std::cout << "sizeof(char) : " << sizeof(char) << std::endl;
    std::cout << "sizeof(float) : " << sizeof(float) << std::endl;
    std::cout << "sizeof(double) : " << sizeof(double) << std::endl;

    std::cin.get();
    return 0;
}

int program14()
{
    int X = 0, Y = 3;
    X = ++Y + 1;

    std::cout << "X: " << X << std::endl;
    std::cin.get();
    return 0;
}

int program15()
{
    int X = 0, Y = 0;

    std::cout << "enter two integers: " << std::endl;
    std::cin >> X >> Y;
    std::cout << X << " and " << Y << std::endl;

    std::cin.ignore();
    std::cin.get();
    return 0;
}

int program16()
{
    int X = 0, Y = 0;

    std::cout << "enter two integers: " << std::endl;
    std::cin >> X >> Y;
    if (X > Y)
    {
        std::cout << "smallest " << Y << std::endl;
    }
    else if (X < Y)
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```
{
    std::cout << "smallest " << X << std::endl;
}

std::cin.ignore();
std::cin.get();
return 0;
}

int program17()
{
    int X = 0, Y = 0;

    std::cout << "enter two integers: " << std::endl;
    std::cin >> X >> Y;
    if (X == Y)
    {
        std::cout << "They are equal " << std::endl;
    }
    else
    {
        std::cout << "They are not equal " << std::endl;
    }

    std::cin.ignore();
    std::cin.get();
    return 0;
}

int program18()
{
    int X = 0;

    std::cout << "enter number of bottles: " << std::endl;
    std::cin >> X;
    for (; X >= 0; X--)
    {
        std::cout << X << " bottles of juice left on the wall, one fell down" << std::endl;
        if (X == 0)
        {
            std::cout << "No bottles left on the wall" << std::endl;
        }
    }
    /*while (X > 0)
    {
        std::cout << X << " bottles of juice left on the wall, one fell down" << std::endl;
        X--;
        if (X == 0)
        {
            std::cout << X << " bottles of juice left on the wall, one fell down" << std::endl;
            std::cout << "No bottles left on the wall" << std::endl;
        }
    }
    */

    std::cin.ignore();
    std::cin.get();
    return 0;
}

int program19()
{
    int value = 0;
    std::cout << "Give me a number: ";
    std::cin >> value;

    if (value > 0)
    {
        int value = 10;
    }
}
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        value *= 2;
    }
    else if (value == 0)
    {
        std::cout << "Not a valid number!" << std::endl;
    }
    else
    {
        std::cout <<"Value: " << value << std::endl;
    }

    std::cin.ignore();
    std::cin.get();
    return 0;
}

int program20()
{
    for (int X = 0; X <= 10; X++)
    {
        std::cout << X << std::endl;
    }
    std::cin.get();
    return 0;
}

int program21()
{
    for (int X = 10; X >= 0; X--)
    {
        std::cout << X << std::endl;
    }
    std::cin.get();
    return 0;
}

int program22()
{
    for (int X = 0; X <= 100; X++)
    {
        if (X%3 == 0)
        {
            std::cout << X << std::endl;
        }
    }
    std::cin.get();
    return 0;
}

int program23()
{
    for (int X = 0; X <= 7; X++)
    {
        std::cout << X << std::endl;
    }
    std::cout << "Going Down" << std::endl;
    for (int X = 6; X >= 0; X--)
    {
        std::cout << X << std::endl;
    }
    std::cin.get();
    return 0;
}

//http://en.wikipedia.org/wiki/Factorial
int program24()
{
    int tal1 = 0, tal2 = 1;
    std::cout << "Write 'N': ";
    std::cin >> tal1;
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    for (int i = 1; tal1 >= i; i++)
    {
        tal2 *= i;
        std::cout << i << " * ";
    }
    std::cout << " = " << tal2 << std::endl;

    std::cin.ignore();
    std::cin.get();
    return 0;
}

int program25()
{
    float tal1 = 0, tal2 = 0;
    char me = 0;
    std::cout << "Enter m/s and choose to convert to km/h or mi/h: ";
    std::cin >> tal1;
    std::cout << "for km/h press k and mi/h press m: ";
    std::cin >> me;

    if (me == 'k')
    {
        tal2 = tal1 * (float)3.6;
        std::cout << tal1 << "m/s is " << tal2 << "km/h" << std::endl;
    }
    else if (me == 'm')
    {
        tal2 = tal1 * (float)2.23694;
        std::cout << tal1 << "m/s is " << tal2 << "mi/h" << std::endl;
    }
    else
    {
        std::cout << "enter right letter m or k" << std::endl;
    }

    std::cin.ignore();
    std::cin.get();
    return 0;
}

int random(int min, int max)
{
    return min + (rand() % (max - min + 1));
}

int program26()
{
    srand((unsigned int)time(0));

    int guess = 0, ran = random(0, 100);

    std::cout << "Guess a number between 1 and 100 " << ran << std::endl;

    for (int i = 0; guess != ran; i++)
    {
        std::cout << "Guess a number: ";
        std::cin >> guess;

        if (guess > ran)
        {
            std::cout << "Too high try again" << std::endl;
        }
        else if (guess < ran)
        {
            std::cout << "Too low try again" << std::endl;
        }
        else
        {
            std::cout << "Congratulations you guessed right!!!!!" << std::endl << "Only took you " << i << "
tries";
        }
    }
}

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    }

    std::cin.ignore();
    std::cin.get();

    return 0;
}

int program27()
{
    srand((unsigned int)time(0));
    int preGuess = 0;
    int guess = 0, ran = random(0, 100);

    std::cout << "Guess a number between 1 and 100 " << ran << std::endl;

    std::cout << "Guess a number: ";
    guess = 50;
    preGuess = 100;
    for (int i = 0; guess != ran; i++)
    {
        //preGuess = guess;
        std::cout << "Guess a number: ";
        std::cout << guess;

        if (guess > ran)
        {
            std::cout << "Too high try again" << std::endl;
            guess -= (preGuess - guess) / 2;
            while (guess > 100 || guess <= 0)
            {
                guess = preGuess / 1.75;
            }
        }
        else if (guess < ran)
        {
            std::cout << "Too low try again" << std::endl;
            guess += (preGuess - guess)/2;
            while (guess > 100 || guess <= 0)
            {
                guess = preGuess * 1.5;
            }
        }
        else
        {
            std::cout << "Congratulations you guessed right!!!!!" << std::endl << "Only took you " << i << "
            tries";
        }
        std::cout << ran << std::endl;
        std::cin.ignore();
        std::cin.get();
        preGuess = guess;
    }

    std::cin.ignore();
    std::cin.get();

    return 0;
}

int _tmain(int argc, _TCHAR* argv[])
{
    program27();
    return 0;
}

```