Homework 5

1. You are working in a game development team. Part of your team are working for the graphics of the game. Your task is to provide them an easy to use framework (few classes) that will be used to calculate the movement of the characters in the game. Your framework should have:
   1. Class that describe the characters in the game, with members like character name(string), mass (in kg), jump speed (in km/h), identifier (unsigned int).
   2. Class that describe the surrounding environment with members like identifier (unsigned int), name of environment (string), gravity (in m/s2).
   3. Class that is used for calculating the maximum jump height (in meters), the time of jump (from the moment of the jump, until the object touches the ground, in seconds), a function which checks if the object is capable of jumping on certain height (if the object is able to jump on the second step of a stairway).

Follow all the rules of OOP development and make the framework as easy to be used as possible. Make a main function containing demonstration of all the calculations.