Problem Set 04 - CPP Project

For each C++ program create a file with a name in the format

`main4`*n*`.cpp`

where *n* is the number of the program in the list below.

Tasks:

1. Write a program that creates a game of Hangman using the words from the accompanying file '`words.txt`' as the word bank. It must randomly select from the word bank and use functions. The game must be case-insensitive, and allow the user to make at most 6 wrong guesses and to reset the game with a new word.
2. Write a program that creates a game of Hangman by defining a class that publicly inherits the accompanying class *HangManGame* and contains

   - ☐ A public default constructor that loads the word bank from the file '`words.txt`' and randomly selects one of the words from the word bank for the game.
   - ☐ A public overridden `MakeGuess()` that makes visible to slots that contain the parameter if the parameter is a missing letter of the word, or decrements the player's chances if the parameter is not a missing letter of the word. It should be case-insensitive and does nothing if the parameter is already a visible letter.
   - ☐ A public overridden `HasSolved()` that returns true if the entire word is revealed; otherwise, it returns false.
   - ☐ A public overridden `Chances()` that returns the remaining chances the player has.
   - ☐ A public overridden `CanPlay()` that return returns true if the word is not completely revealed and the player has remaining chances; otherwise, it returns false.
   - ☐ A public overridden `Reset()` that resets the game with a new word.
   - ☐ A public overridden `ToString()` that generates a string in the format

     `Word:` *w*
     `Changes:` *c* `left`
     `Guesses:` *g*

     where *w*, *c*, and *g* are the currently revealed word, remaining player chances, and a list of letters already guessed, respectively.

   Afterward, in the main function

   - ☐ It creates a game object.
   - ☐ It repeatedly displays the game object and prompts the user to enter a guess until the game cannot be played.
   - ☐ It displays the results after the game ends and asks the player if they want to play again. If the player says yes, it starts a new game.