Decomposition

Identifying the components of the problem and what needs to be achieved in order to solve that problem.

You have been commissioned to create a single player hangman game. Description of what is happening in a game has been provided:

*The computer randomly chooses a five-letter word from its dictionary and displays the appropriate number of symbols on the screen, to represent one letter in the chosen word. The player is then asked to make a guess about the possible letter. If the guess is correct, the letters that are hidden will be revealed. If the guess us incorrect, then another piece of the hangman drawing is added and displayed (output on the screen). The process is repeated until either, the whole word is guesses or the hangman drawing is complete.*

Task 1

Firstly you need to identify all steps involved; you may do that by splitting the sentences. Then, break these down even further by splitting the sentences on the keywords AND and OR. Rewrite all statement as a list of components of the initial problem.

e.g.

1. The computer randomly chooses a five-letter word for its dictionary.

2. The appropriate number of symbols \* are displayed on the screen; each \* represent a single letter.

Task 2

Having already identified the major components of the problem you can now produce a list of the key steps for each. I have started for you that task.

1. The computer randomly chooses a five-letter word for its dictionary.

To solve the problem you must then:

1. Create a dictionary holding suitable five-letter words.
2. Randomly generate a number between 1 and the number of words in the dictionary.
3. Use the randon muber to select a word for the dicionary and store it somewhere where it can be accessed.

2. The appropriate number of symbols \* are displayed on the screen; each \* represent a single letter.

To solve the problem you must then:

1. ……..