

## Exercise – Using Variables

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First are quick review questions that you should write down the answers for in a document. The second part is practical exercises. Both are important for your learning and to help you retain the concepts.

### Review Questions

1. What is a variable?
2. What type of variable is an **int**?
3. What type of variable is a **float**?
4. What type of variable is a **bool** or **boolean**?
5. What type of variable is a **string**?
6. What does “Declaring a variable” mean?
7. Give an example of declaring a variable:
8. What does “Initialising a variable” mean?
9. Give an example of initialising a variable:
10. Can ints have decimal values?
11. Can floats have decimal values?
12. What would be a good variable type for an enemies health?
13. What would be a good variable type for a players speed?
14. What would be a good variable type for storing dialogue?
15. What would be a good variable type for tracking whether the player is alive or dead?
16. What is Camel Case?
17. Write how you would name a variable in code called “player power up”:

### Practical Exercise

Make a new C# console project in Visual Studio and call it **VariablesExercise**. Inside the **Main** function, let's use some variables.

1. Declare an int called “player health” with no initial value.
2. Declare a boolean called “in combat” and set it's initial value to false.
3. Declare an int called “monster health” with an initial value of 100.
4. On the next line, initialise the “player health” variable to 100.
5. On the next line, change the “monster health” variable to 50.
6. Create a string called “battle start text” and set text to display at the start of a battle.

7. Create a new string called “player health text” and set its initial text to describe how much health the player has.
8. Create another string called “monster health text” and initialize the text to describe how much health the monster has.
9. Print out all of your text to the console, announcing the start of a battle and displaying the health of the player and monster.