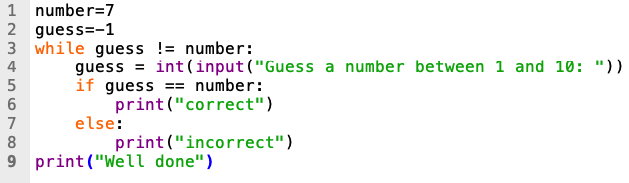
**Handout 2: While Loop Programming Activity**

**Activity 1 –** [**Link to code**](https://trinket.io/python3/3b58e9f3a5)

Look at the code that has been shared with you



**Predict**

In the box predict what you think the code will do when run

|  |
| --- |
| It will allow the user to enter a number. If you get it wrong it will repeat. |

**Run**

Now run the code, what did it do?

|  |
| --- |
| It will allow the user to enter a number. If you get it wrong it will repeat. |

**Investigate**

Now have a good look at the code and answer the following

1. What does the condition operator != do on Line 3

|  |
| --- |
| Not equal to. |

2. List the line numbers that are part of the while loop

|  |
| --- |
| 3 to 8 |

3. Run the program What happens if you just hit enter, why ?

|  |
| --- |
| You get a run time error. |

4. On Line 2 the guess is set to an out-of-range value of -1, why is that?

|  |
| --- |
| To make sure that the loop starts at least once. |

**Activity 2**

**Modify**

Using the code make the modifications below. run it after each task to make sure it works

1. **Count:** Add a feature to count the number of guesses and display it after each guess
   1. Initialise the variable guesses first at the top of your program.
   2. Decide what line of code will increment the variable by one after each guess.
   3. Place the line of code in the most appropriate place.
   4. Test your new code by printing the variable to see if it increments after each guess in the format “Number of guesses so far is:”
2. **Top Guesser:** Add a feature that prints at the end of the game “you are a top guesser” if they guess in less than three attempts.
3. **Limited goes:** Limit the number of guesses to five attempts. If they exceed five it displays the message “too many attempts, better luck next time”

[Link to a solution](https://trinket.io/python/ba05aafd23) - Note this is written in procedures to show each part. You don’t need to have written it in procedures.

**Make**

Taking what you have learnt so far tackle this new problem

Perfect Pizza: Create a program that

* allows the user to make a custom pizza by adding the toppings of their choice
* when they have finished adding toppings they end it by typing BAKE.
* keep track of the cost of the pizza, and display it after baking
* pizza cost is £3 for the base and £1 for each topping

**Challenge level** -If you get that finished work out a way to remember what all the toppings are and display them just before you bake it

[Link to a solution](https://trinket.io/python3/0ff05b2b34) - Again, this is written as a procedure but doesn’t need to be.