# Guessing Game

Write a guess the number game. The computer will choose a number between 1 and 100, the user must guess that number!

## Task

In a normal project the team would create a plan, confirm that the plan is correct and then start coding. Once the code is written it will be tested to confirm that it works.

We will do this backwards (in future projects we will do the correct sequence of tasks):

1. Write code
2. Ensure game works
3. Create top down decomposition document
4. Create flowchart
5. Write up testing

## Code hints

Put this line at the top of your code:



Then this code will print a random number from 0 to 9 inclusive:



And this line of code will put a random number between 0 and 9 into the variable **irand**



Using these clues and a while loop, you should have enough information to code the game!

**Extension** 1 – Only attempt if you are very confident!

If the user has guessed a wrong number, tell them if they are too high or too low. Hint: you will need to use a mathematical comparison operator in you **if** statement.

**Extension** 2 – this is really hard!

If the user has guessed a wrong number but are close – tell them they are close!

Make up your own definition of close (e.g. within 5 of the target number)

**Extension 3** – functions

A block of code should be around 30 lines long. Any longer and you should chop it up into well named functions.

1. Do some research – is 30 lines of code correct? Is there a better rule of thumb?
2. ‘Refactor’ (change the structure of) your code into functions.

**Extension 4** – multiplayer!

Allow more than one player. Save the players name and score. Display a high score table