



# A level Computer Science Transition work 2025



**Congratulations** on your A level choice of 'Computer Science'. The exam board for this course is **OCR**. The course code and name is **(H046/H446) A Level Computer Science**, so you can access further resources via <https://www.ocr.org.uk/qualifications/as-and-a-level/computer-science-h046-h446-from-2015/> I have no doubt you will enjoy this course although at times the work will be challenging. The work outlined below will get you prepared for the course. However, do not forget to have a holiday! Please hand your work in your first lesson of the course. Have a wonderful holiday, see you in September! **Mrs Nemauro**

## **Task 1: Discussing the legal and moral implications of the use of AI (1000 words)**

- Describe what is mean by AI
- Research the use of Artificial Intelligence (AI) in generating photographs about people, property, landscapes and objects.
- Explain the legal and moral approach associated with using AI to generate photographs
- Finally, try and give an indication of what the future might look like? Make sure you include current and future uses of Artificial Intelligence (AI).

## **Task 2: High Level Programming Language (400 words)**

- Describe what is High Level programming Language and give examples.
- Describe what is low-level programming language and give examples.
- Suggest which technical projects might require the use of high level or low-level programming language and conclude.

## **Task 3: Python**

For task 4, you will require a copy of Python IDLE 3.10 or later. You can download the most up to date copy of Python idle from (<https://www.python.org/downloads/> )

#### Task 4: Python Programming Task

You may remember this task from your GCSE Computer Science course! Create a simple guessing game in Python, where the computer generates a random number between 1 and 100. Your task is to:

- (i) Write a program for a guessing game. The computer selects a random integer between 1 and 100. The user tries to guess the number. The computer informs the user if the number is too high or too low. The user keeps guessing until the guess is correct.

Extension:

1. The program tells the user how many guesses they have had.
2. The user has the option to play again
3. Find out what is the most effective strategy for playing the guessing game?

- (ii) Write a subroutine program that generates random math's questions for adding, subtracting, multiplying or dividing pairs of numbers.

#### Finally:

For this program, you are required to show evidence of:

- Screen shots that demonstrate the above programs.
- Including detailed explanations of how it works and comments within your code.
- Including screen shots of your code to prove that it is running error free
- A range of testing (Normal, Extreme, Erroneous). An example of a testing table is included below:

Test	Reason	Data	Expected outcome	Actual outcome	Comments
To see if the cars that has gone over the speed limit is saved in a variable	Because that way the cars that have gone over the speed limit can be saved and printed out	If E12 2344 has gone over the speed limit store in variable	[E12 2344] has gone over the speed limit	<pre> 11 is over the speed limit Mph</pre>	Works fine
To see if the program can restart	Because if the user has more cars then rather than ending the program and starting it again and lose the data restart the program and save the data. This is the only wave to be saved as a list	Subroutine() If user== yes Subroutine()	Are there any more vehicles? Yes What is the vehicle reg number?	<pre>do you have vehicle to enter yes or noyes 8 is over the speed limit Mph Please enter Reg number :11</pre>	Works fine
To see if the multiple cars that has gone over the speed limit can be printed out in a list	Because if the user has multiple cars that has gone over the speed limit, then it can be saved and it would be easier.	E12 2344, 12Y EU35, 123 TYER has gone over the speed limit store as list	[E12 2344, 12Y EU35, 123 TYER] has gone over the speed limit	<pre> 11 is over the speed limit Mph ['8', '11'] &gt;&gt;&gt;</pre>	I needed to create a list variable and make sure it stores it there before the subroutine