

## Year 10 Computer Science Additional Homework Tasks

All **tasks** should be **evidenced** by screen snipping, or uploading to your OneNote exercise book (into the Homework section) or directly into your class theory exercise book.



1. Complete an activity from the <b>Starters section</b> of your OneNote exercise books – try out a Python <b>Starter Challenge!</b> Screen snip the evidence
2. Search for and watch the video, <i>OCR GCSE SLR1.8 Legislation relevant to Computer Science</i> at <a href="https://student.craigndave.org">https://student.craigndave.org</a> <ul style="list-style-type: none"><li>• Identify the titles of the relevant legislation and explain their <b>key features</b></li></ul>
3. <b>Test</b> your knowledge of <b>Python's Strings</b> : <ul style="list-style-type: none"><li>• <a href="https://hourofpython.trinket.io/python-challenges#/string-challenges/lowercase-challenge">https://hourofpython.trinket.io/python-challenges#/string-challenges/lowercase-challenge</a></li><li>• <a href="https://hourofpython.trinket.io/python-challenges#/string-challenges/uppercase-challenge">https://hourofpython.trinket.io/python-challenges#/string-challenges/uppercase-challenge</a></li><li>• <a href="https://hourofpython.trinket.io/python-challenges#/string-challenges/number-of-things-challenge">https://hourofpython.trinket.io/python-challenges#/string-challenges/number-of-things-challenge</a></li></ul>
4. <b>Research Task:</b> Carry out some research to find out the <b>impact of e-waste</b> on developing countries: <ul style="list-style-type: none"><li>• Prepare a <b>summary report</b> to outline the main problems associated with the disposal of old digital equipment.</li><li>• <b>Outline</b> any legislation that has been put in place to try and help prevent the illegal dumping of e-waste</li></ul>
5. Write an <b>algorithm</b> to show the steps in baking a cake. It should be annotated to show where, <b>sequence</b> , <b>selection</b> , and <b>iteration</b> have been used
6. Draw a <b>flowchart</b> for an algorithm to find the <b>sum of 20 numbers</b> and <b>output</b> the result. You will need to use the correct flowchart <b>notation</b> for this task.
7. An online store gives a discount of <b>15%</b> for purchases of <b>£200</b> and over, up to a <i>total</i> discount of <b>£350</b> . Write an algorithm, in <b>pseudocode</b> , that would <i>allow a user to calculate</i> the <b>discount</b> . You can refer to your Edexcel pseudocode help sheet
8. <b>Complete</b> a programming task at <a href="https://snakify.org/en/">https://snakify.org/en/</a> <ul style="list-style-type: none"><li>• Make <b>notes</b> to explain any new syntax you have used</li></ul>
9. <b>Complete</b> an hour of code in Python at: <a href="https://hourofpython.trinket.io/a-visual-introduction-to-python#/welcome/an-hour-of-code">https://hourofpython.trinket.io/a-visual-introduction-to-python#/welcome/an-hour-of-code</a>
10. What is the <b>Digital Divide</b> ? <ul style="list-style-type: none"><li>• What <b>factors</b> are considered to contribute to the digital divide in the <b>UK</b>?</li><li>• What <b>factors</b> are considered to contribute in a <b>LEDC</b>?</li></ul>
11. Create a <b>one-page handout</b> for your class to explain the difference between <b>compilers</b> and <b>translators</b> . <ul style="list-style-type: none"><li>• Try to think of a suitable <b>analogy</b> or <b>mnemonic</b> to help students remember the difference</li></ul>