

# Level 3 Cambridge Technical in IT

## (Diploma – Double)

Please complete the below work in preparation for your start at Franklin this September.

This work should be brought with you to enrolment and your first day at Franklin.

If you aren't attending enrolment on site please just bring this when you first come to the college in September.

This should be completed in time for enrolment, work can be in a written or electronic format.

Any questions please contact our admissions department – [admissions@franklin.ac.uk](mailto:admissions@franklin.ac.uk)

In order to help you make the best possible start to your studies at Franklin, we have put together some bridging work that you will need to complete before you enrol. Doing your best in this work will ensure you make the most of the early weeks, which we know are really important in getting the best you can from your studies. This work must be completed to the best of your ability and handed in at your enrolment. In a sense, this is your first piece of homework and it is important to note that it will be your first piece of assessed work, it is therefore a requirement of enrolling on to your study programme.

<p>Topic / Context</p>	<p><b>Understanding Computer Hardware &amp; Software</b></p> <p>Computers are everywhere. They are in our pockets, driving our cars, powering our TV and the programs we watch; computers are on our wrists tracking our steps and sending us the latest notification from Snapchat. Hardware (the physical devices) and Software (the programmes and apps) have evolved fast over the last 10 years and the rate of change is forever increasing.</p>
<p>Task</p>	<p><b>Understanding Computer Hardware &amp; Software</b></p> <p>Task1:</p> <p>Imagine the year is 1999 (20 years ago) – produce a review or article for an IT magazine that describes the latest trend in computing devices (including desktops / mobile phones etc.) This should include discussion on the latest hardware and advances in technology.</p> <p>Task2:</p> <p>Imagine the year is 2040 (20 years in the future) – produce a review / article for an IT magazine on the latest technology (what do you imagine this will be like in 20 years' time? What will be the cutting edge hardware?)</p> <p><b>Web-site Design</b></p> <p>During the course, you will have the opportunity to develop a website for a real client – Franklin Professionals; this is in association with the Careers Academy program at Franklin College and will showcase the opportunities to work with professionals.</p>

	Using whichever Graphical Software of your choice – create a suitable logo to be displayed on the website. Ensure use of Franklin College colour scheme, which can be found on Franklin Colleges website.
<b>Resources</b>	<p><b>Online Research</b></p> <p>Other than the resource links in the task - please see:</p> <p><a href="https://www.mathsisfun.com/binary-digits.html">https://www.mathsisfun.com/binary-digits.html</a></p> <p><a href="https://www.mathsisfun.com/binary-number-system.html">https://www.mathsisfun.com/binary-number-system.html</a></p> <p><a href="https://www.youtube.com/watch?v=bsNWzQ3S8pE">https://www.youtube.com/watch?v=bsNWzQ3S8pE</a></p> <p><a href="https://www.youtube.com/watch?v=Y4Q9PnjKhac">https://www.youtube.com/watch?v=Y4Q9PnjKhac</a></p>
<b>Presentation</b>	<p>Produce a <b>handwritten</b> explanation and guide on how to convert from Denary to Binary and vice versa, how to convert from Denary to Hex and vice versa. Use examples throughout.</p> <p>Produce a table of the results for <math>2^0=</math> through to <math>2^{20}=</math> this will be used regularly in lessons so should be presented well.</p> <p>Complete the questions from the worksheet as per task above.</p> <p>Produce an annotated – colour print of your logo design justifying why you think it is appropriate.</p>

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<p>Topic / Context</p>	<p><b>Application inventor</b></p> <p>The world is increasingly reliant on applications that help individuals, businesses and organisations achieve specific activities or purposes. MIT App Inventor is an intuitive, visual programming environment that allows everyone to build fully functional apps for smartphones and tablets. Using MIT App Inventor you can have a simple first app up and running in less than 30 minutes. And what's more, the blocks-based tool facilitates the creation of complex, high-impact apps in significantly less time than traditional programming environments.</p>
<p>Task</p>	<p><b>MIT App Inventor 2</b></p> <p>Activity 1: Show that you are able to work independently by following online instructions to build and develop an app using MIT App Inventor 2.</p> <p>You will first need to setup App Inventor by reading and following through the instructions found at the following website:  <a href="http://appinventor.mit.edu/explore/ai2/setup.html">http://appinventor.mit.edu/explore/ai2/setup.html</a></p> <p><b>Note: Internet Explorer is not supported. We recommend Chrome or Firefox.</b></p> <p>Activity 2: Next, take a tour of the designer and block editor by reading through the following website: <a href="http://appinventor.mit.edu/explore/designer-blocks.html">http://appinventor.mit.edu/explore/designer-blocks.html</a></p> <p>Activity 3: Follow the 'Using Multiple Screens in App Inventor' video on the following YouTube channel: <a href="https://www.youtube.com/watch?v=gXXRpjzrBsA&amp;feature=youtu.be">https://www.youtube.com/watch?v=gXXRpjzrBsA&amp;feature=youtu.be</a></p> <p>Activity 4: Follow the 'How to make a Six Pack Menu in App Inventor' video on the following YouTube channel: <a href="https://www.youtube.com/watch?v=jIB-377wzpM&amp;feature=youtu.be">https://www.youtube.com/watch?v=jIB-377wzpM&amp;feature=youtu.be</a></p>
<p>Resources</p>	<p><b>Online Research</b></p> <p><a href="http://appinventor.mit.edu/explore/ai2/setup.html">http://appinventor.mit.edu/explore/ai2/setup.html</a>  <a href="http://appinventor.mit.edu/explore/designer-blocks.html">http://appinventor.mit.edu/explore/designer-blocks.html</a>  <a href="https://www.youtube.com/watch?v=gXXRpjzrBsA&amp;feature=youtu.be">https://www.youtube.com/watch?v=gXXRpjzrBsA&amp;feature=youtu.be</a>  <a href="https://www.youtube.com/watch?v=jIB-377wzpM&amp;feature=youtu.be">https://www.youtube.com/watch?v=jIB-377wzpM&amp;feature=youtu.be</a></p>
<p>Presentation</p>	<p>Take screen grabs from the designer and code blocks to show you have developed the applications. Print off your screen grabs, ensuring your name is in either the header or footer of your document and <b>annotate</b> the screen grabs by <b>hand</b> to identify and explain the features and functions you have used.</p>

