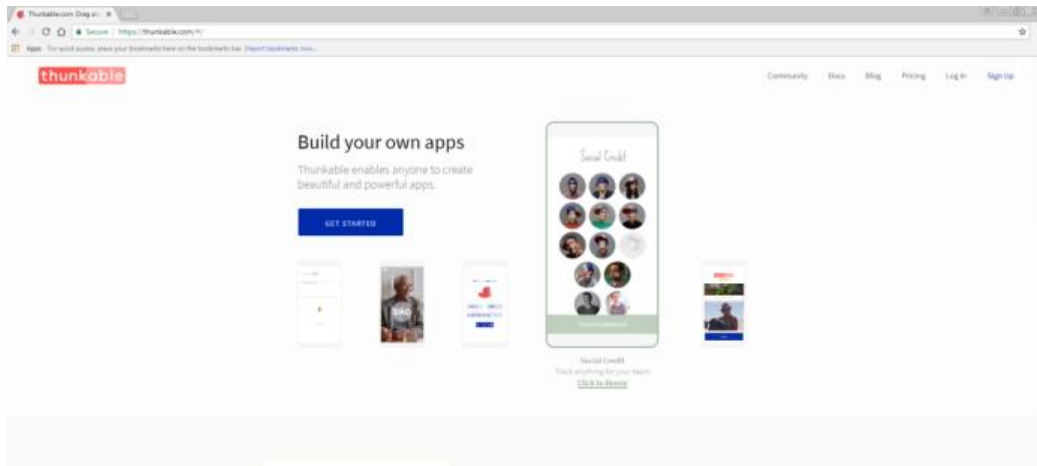


# OCR Cambridge Technicals level 3 - IT

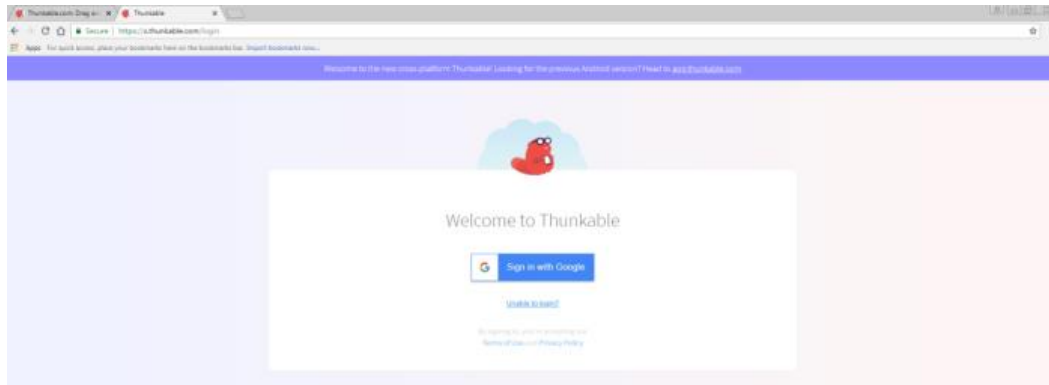
## Year 12 - Summer Task

Create a learning/revision app on **two specification sections** from Learning Objective 1 of Unit 1 – Fundamentals of IT.

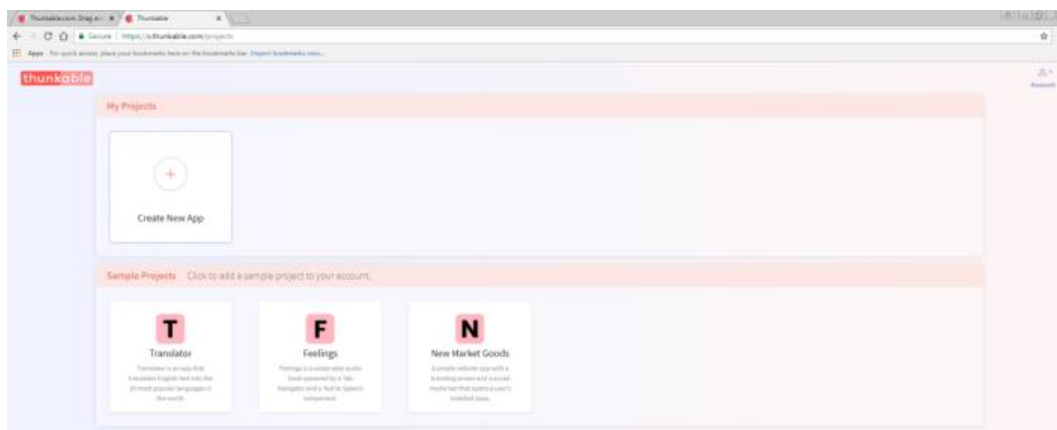
Go to the website: <https://thinkable.com/#/>



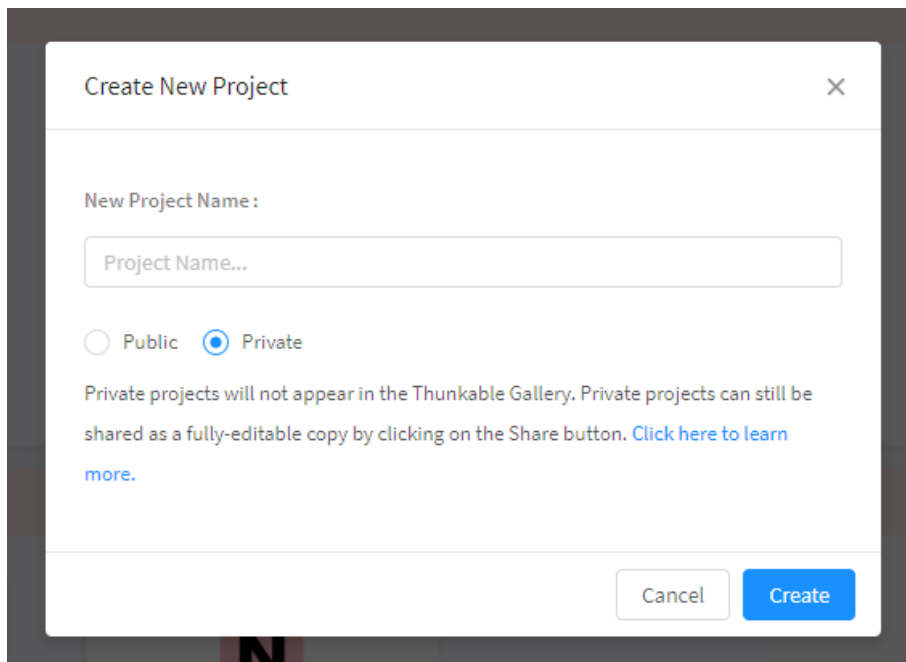
Click on 'Get Started' then create an account (you will need a Google account to link it to):



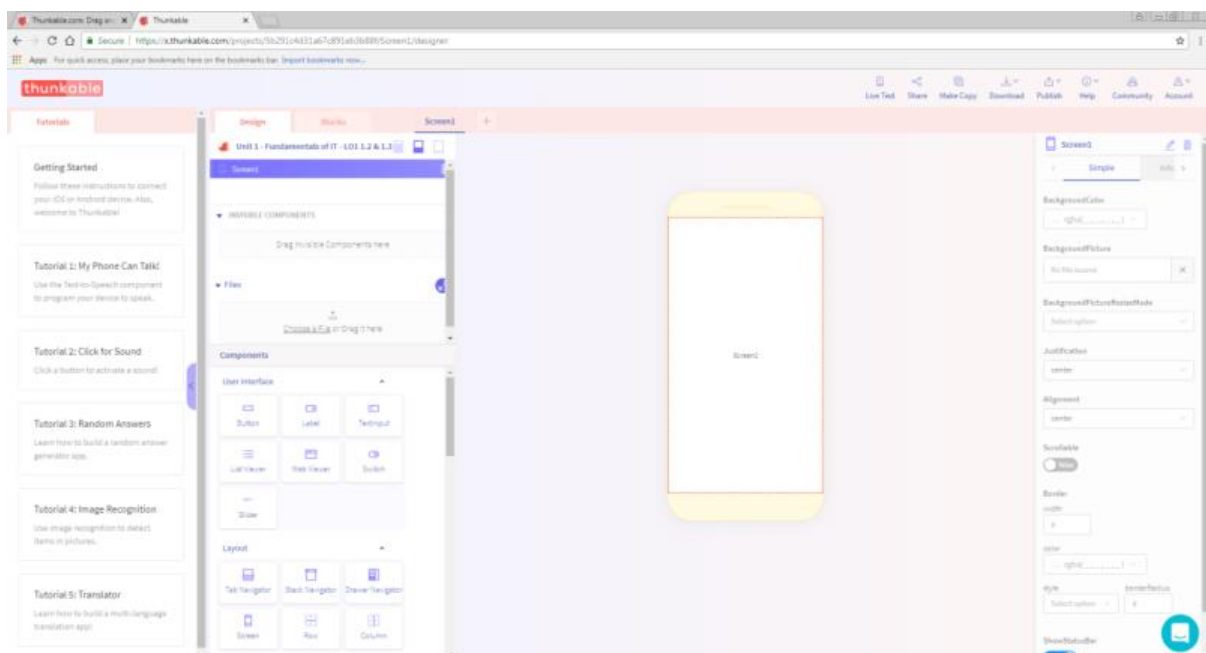
Select 'Create New App'.



Give the project a suitable name and for now make it private, then click 'Create';



Watch the tutorials (down the left hand side) to understand the basics of the software. There is also a help menu with a YouTube link if you get really stuck.



<https://docs.thunkable.com/thunkable-cross-platform/get-started/tutorials>

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
<p>1. Understand computer hardware</p>	<p>1.1 Computer hardware, i.e.:</p> <ul style="list-style-type: none"> <li>• input devices</li> <li>• output devices</li> <li>• communications devices</li> <li>• benefits (e.g. integrated devices make portable devices simpler to use)</li> <li>• limitations (e.g. voice recognition performs poorly in noisy environments)</li> <li>• uses (e.g. membrane keyboard could be used in harsh physical environments)</li> </ul> <p>1.2 Computer components, i.e.:</p> <ul style="list-style-type: none"> <li>• processors</li> <li>• motherboards</li> <li>• storage (i.e. hard drive, solid state, flash, internal, removable, SAS, SCSI, portable, Cloud)</li> <li>• ports (i.e. USB, Firewire, SATA, Network, Fibre Channel)</li> <li>• memory (i.e. RAM, ROM, cache)</li> </ul>

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
	<ul style="list-style-type: none"> <li>• expansion cards (i.e. sound, network, graphics, storage controller, fibre channel)</li> <li>• power supplies</li> <li>• characteristics</li> <li>• purpose</li> </ul> <p>1.3 Types of computer system, i.e.:</p> <ul style="list-style-type: none"> <li>• desktop/server</li> <li>• tablet/hybrid</li> <li>• smartphone</li> <li>• embedded system/Internet of Things (e.g. cars, home appliances, etc.)</li> <li>• mainframe</li> <li>• quantum</li> <li>• uses (e.g. tablet device can be used when travelling due to physical properties)</li> <li>• benefits (e.g. desktop computer can have a large screen which can improve productivity)</li> <li>• limitations (e.g. mainframes can be expensive to purchase and maintain)</li> </ul> <p>1.4 Connectivity methods, i.e.:</p> <ul style="list-style-type: none"> <li>• copper</li> <li>• fibre</li> <li>• wireless technologies (i.e. Bluetooth, WiFi, microwave, infrared, laser, Satellite, GSM, 3G/4G and future technologies)</li> <li>• characteristics</li> <li>• purpose</li> </ul>

Learning outcomes	Teaching content
The Learner will:	Learners must be taught:
	<p>1.5 Communications hardware, i.e.:</p> <ul style="list-style-type: none"> <li>• hub</li> <li>• switch</li> <li>• router</li> <li>• modem</li> <li>• wireless access point</li> <li>• combined/hybrid devices</li> <li>• characteristics</li> <li>• purpose and use</li> </ul> <p>1.6 Hardware troubleshooting, i.e.:</p> <ul style="list-style-type: none"> <li>• identifying hardware faults</li> <li>• troubleshooting tools</li> <li>• documentation/fault management</li> </ul> <p>1.7 Units of measurement, i.e.:</p> <ul style="list-style-type: none"> <li>• bit, nibble, byte</li> <li>• metric (i.e. kilo, mega, giga, tera, peta)</li> <li>• binary (i.e. kibi, mebi, gibi, tebi, pebi)</li> <li>• comparison in sizes between metric and binary measurements. e.g. 1 kilobyte = 1000 bytes vs 1024 bytes</li> </ul> <p>1.8 Number systems, i.e.:</p> <ul style="list-style-type: none"> <li>• binary</li> <li>• decimal</li> <li>• hexadecimal</li> </ul> <p>1.9 Number conversion, i.e.:</p> <ul style="list-style-type: none"> <li>• converting between binary, decimal and hexadecimal</li> </ul>