# Summer Work

## NEA

1. Start to research your project idea – keep some notes in the NEA tab (Proposal->Notes). This will help you to produce your analysis in September. This could be looking at standard algorithms, some market research from your chosen target audience, analysis of existing systems, interviews etc.
2. Produce a prototype of your project – this will need to be a cut down version, in your chosen programming language, using the most technically ambitious skills as a ‘proof of concept’ that your project is going to be achievable.
3. Start writing the objectives of your project
4. Prepare a presentation to the class summarising the work you have done on points 1 & 2 and have your prototype ready to show off.

Here is an example of what you could include on your slides:

* What is your project idea?
* Who is target audience?
* What research have you done for the analysis?
* What is your prototype?
* Why is that the bit you decided to do for your project?
* Talk us through the interesting bits of the  code you have written
* Show a demo of the prototype working (or have a video to play)
* List of objectives

## Unit 12 – OOP and Functional Programming – Lesson 3

You will need to make sure all of this is complete:

1. all the notes for Lesson 3 – Functional Programming
2. worksheet and homework sheets for Functional Programming
3. Introductory Guide to Functional Programming Haskell

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No pressure, but if you get bored these future learn courses might be useful enrichment for you:

* Big data - [https://www.futurelearn.com/courses/applied-big-data-analytics](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.futurelearn.com%2Fcourses%2Fapplied-big-data-analytics&data=04%7C01%7CFRamkhalawon%40opgs.org%7C41fd95755a58410d50aa08d9478c383f%7C064b53d940d84867b4932e949a06ed13%7C1%7C0%7C637619489819263020%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=bfVgMG%2FfX3xHW2ZPFC89Fj%2FNYGCCE9QxmX21CpmCbAo%3D&reserved=0)
* AI - [https://www.futurelearn.com/courses/artificial-intelligence](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.futurelearn.com%2Fcourses%2Fartificial-intelligence&data=04%7C01%7CFRamkhalawon%40opgs.org%7C41fd95755a58410d50aa08d9478c383f%7C064b53d940d84867b4932e949a06ed13%7C1%7C0%7C637619489819272972%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=5dmOgN56D%2BwAuapRBfdQd9GYCphJIo3v2r8iZSD1Dus%3D&reserved=0)
* Encryption and cryptography - [https://www.futurelearn.com/courses/encryption-and-cryptography](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.futurelearn.com%2Fcourses%2Fencryption-and-cryptography&data=04%7C01%7CFRamkhalawon%40opgs.org%7C41fd95755a58410d50aa08d9478c383f%7C064b53d940d84867b4932e949a06ed13%7C1%7C0%7C637619489819272972%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=hzDsDiFF1umej2ejf%2FhGKJPyDc2KG02HMsr3vYn5kBc%3D&reserved=0)
* Ethical hacking - [https://www.futurelearn.com/courses/ethical-hacking-an-introduction](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.futurelearn.com%2Fcourses%2Fethical-hacking-an-introduction&data=04%7C01%7CFRamkhalawon%40opgs.org%7C41fd95755a58410d50aa08d9478c383f%7C064b53d940d84867b4932e949a06ed13%7C1%7C0%7C637619489819272972%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=7k%2BlNOcgUuNLmcDwVWwxKGSOs22aSCFPy5dQQNzXI%2BE%3D&reserved=0)