



A-Level Computer Science

You have already had access to induction material, completing tasks for the July induction day. In addition the following need to be completed over the summer and brought with you in September.

THE RISE OF

COMPUTER SCIENCE FOR EVERYONE

COMPUTER SCIENCE SKILLS OPEN DOORS TO HIGH-PAYING, HIGH-DEMAND JOBS

Computer science skills have become **one of the most attractive qualities to employers** – and not just for traditional computing jobs.

CS skills are **65%** of the fastest growing skills

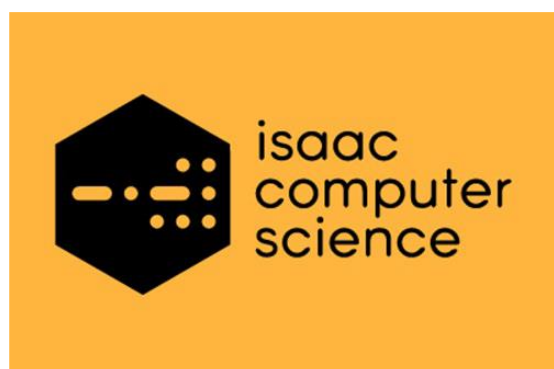
CS skills are **62%** of the highest paying skills

ORACLE ACADEMY Source: Analysis by Burning Glass Technologies. All data are from analysis of 26 million U.S. online job postings collected by Burning Glass in 2016.

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A must for all our A-level Computer Science Students

https://isaacomputerscience.org/pages/specification_page_aqa



Task One: programming in Python

Attempt the FutureLearn.com online Python Course. This will expand on your programming skills which you learnt via Snakify in Year 10/11.

<https://www.futurelearn.com/courses/programming-for-everybody-python>

What topics will you cover?

- understanding a program
- using variables in programs
- conditional execution (if statements)
- repeated execution / looping (for statements)
- functions and code reuse

Task Two: object oriented programming

Attempt the FutureLearn.com online Python OOP course. This course will prepare you for your Year 12 programming project and course material.

<https://www.futurelearn.com/courses/object-oriented-principles>

What topics will you cover?

- principles of object-oriented programming in Python
- the difference between a function and an object
- creating objects, functions, methods, and classes
- writing a text-based adventure game
- extending other people's classes, including inheritance and polymorphism
- sharing your code with other learners, and see theirs.
- developing ideas for using object-oriented programming in the classroom

Have a good summer and we look forward to seeing you in September
