

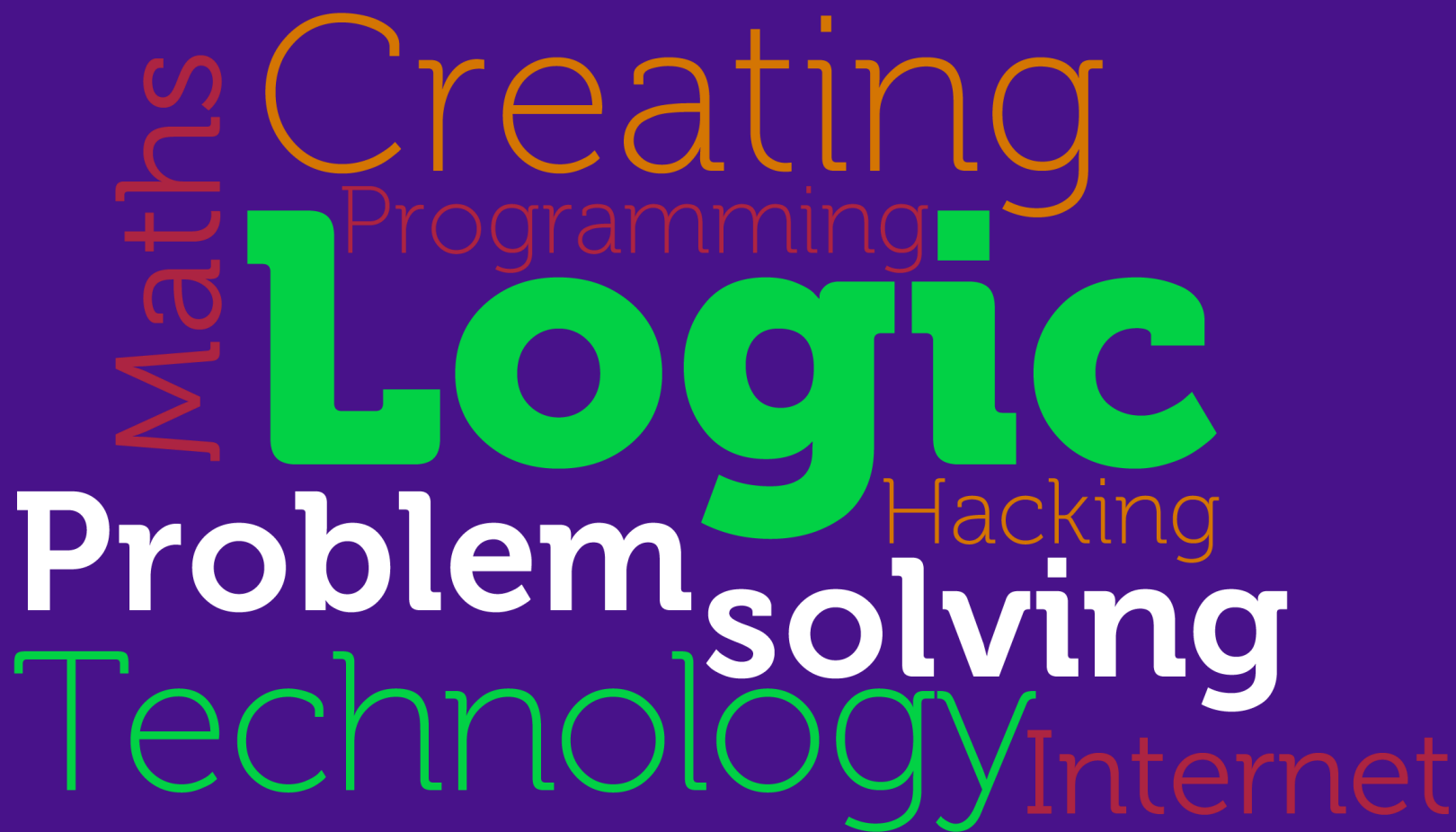
Options talks

---

**GCSE**

**Computer  
Science**

# Do you like...?

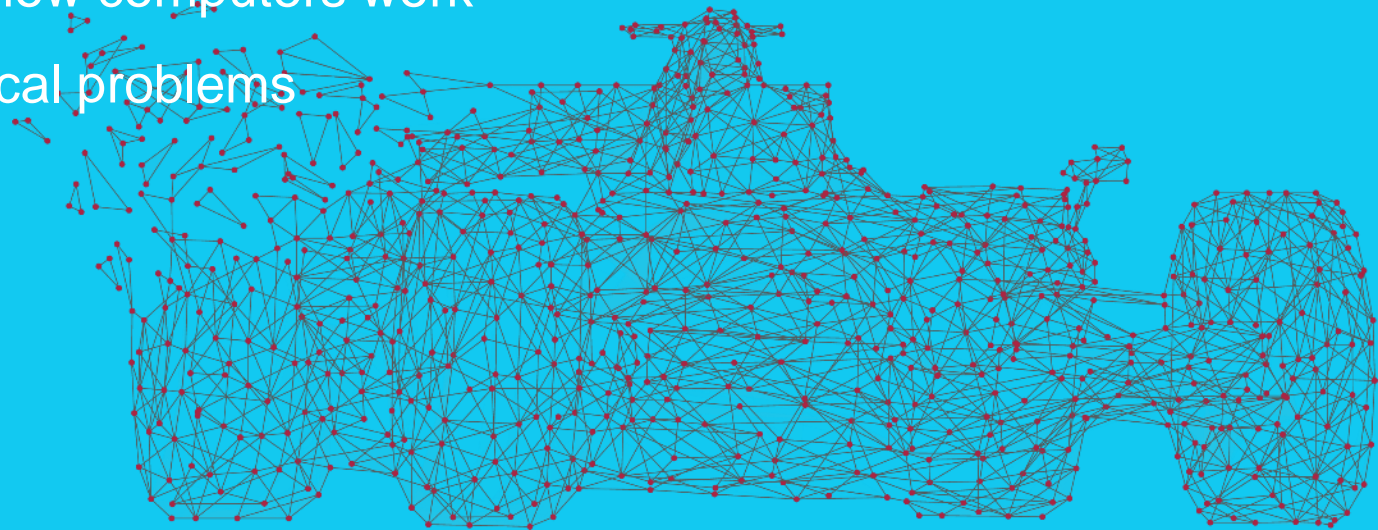


A word cloud of computer science related terms. The words are arranged in a cluster, with 'Logic' being the largest and most prominent. Other words include 'Creating', 'Programming', 'Maths', 'Problem solving', 'Technology', 'Hacking', and 'Internet'. The colors of the words are primarily green, orange, and white.

Maths  
Creating  
Programming  
**Logic**  
Problem solving  
Hacking  
Technology  
Internet

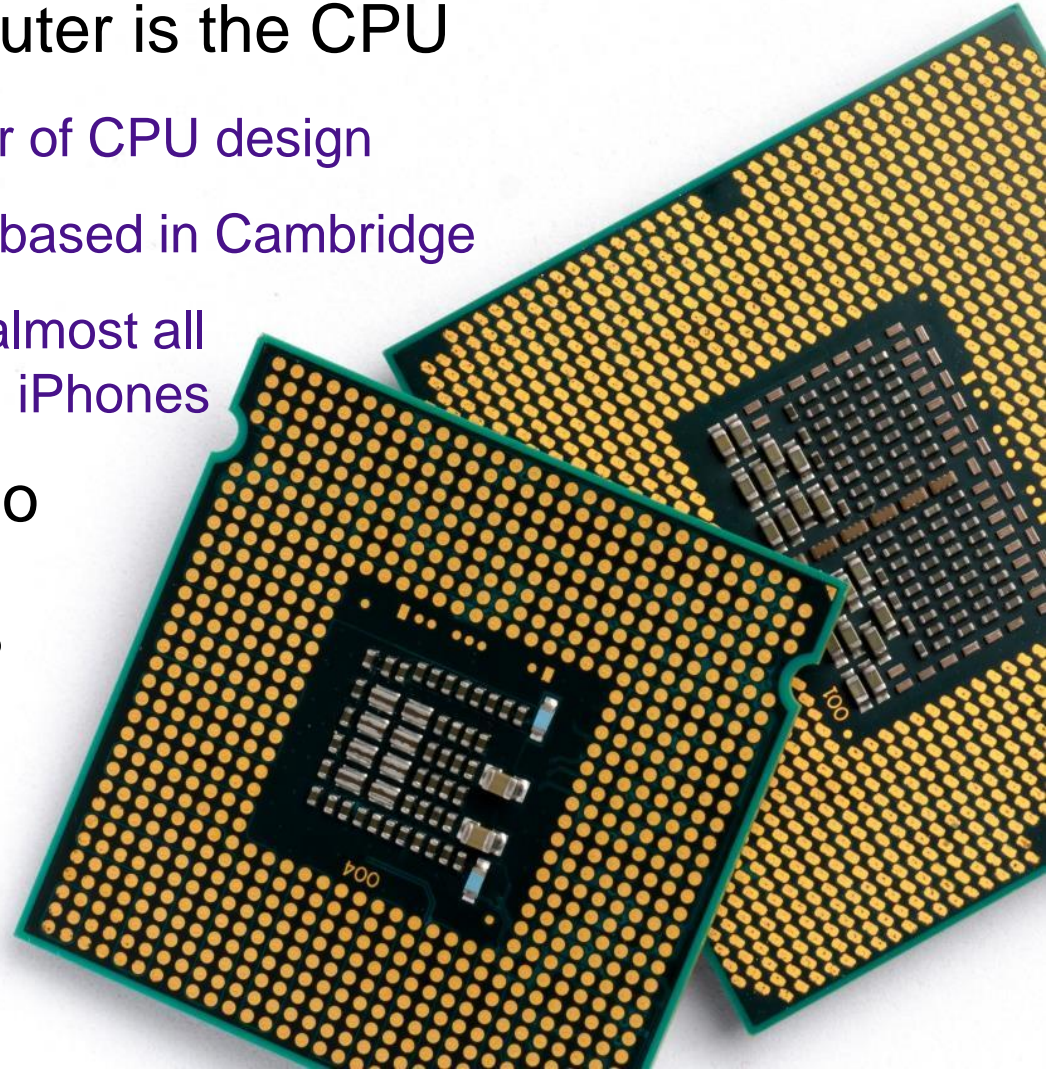
# Why choose CS?

- Computers are changing every part of our lives at an ever increasing rate – why not drive the future?
- In this GCSE:
  - Experience programming and making new software
  - Find out how hackers attack computers
  - Discover how computers work
  - Solve logical problems



# CPU design

- The brain of any computer is the CPU
  - The UK is a world leader of CPU design
  - Made by ARM, who are based in Cambridge
  - ARM chips are used in almost all mobile phones including iPhones
- Are you the person who will design the next generation of devices?





# Drones

- Drones are already used for film making, search & rescue and surveying
  - In the future, deliveries to your house could be made by drone
  - They will need programmers to tell them where and when to go each day
- Would you like to be a part of this future?



# Robotics

- We are finding more and more uses for robots
  - Robotic vacuums in the home
  - Car assembly
  - Clearing mines in a war zone
- To make a robot you need to have a good understanding of how computers work and how to program them



# The World Wide Web

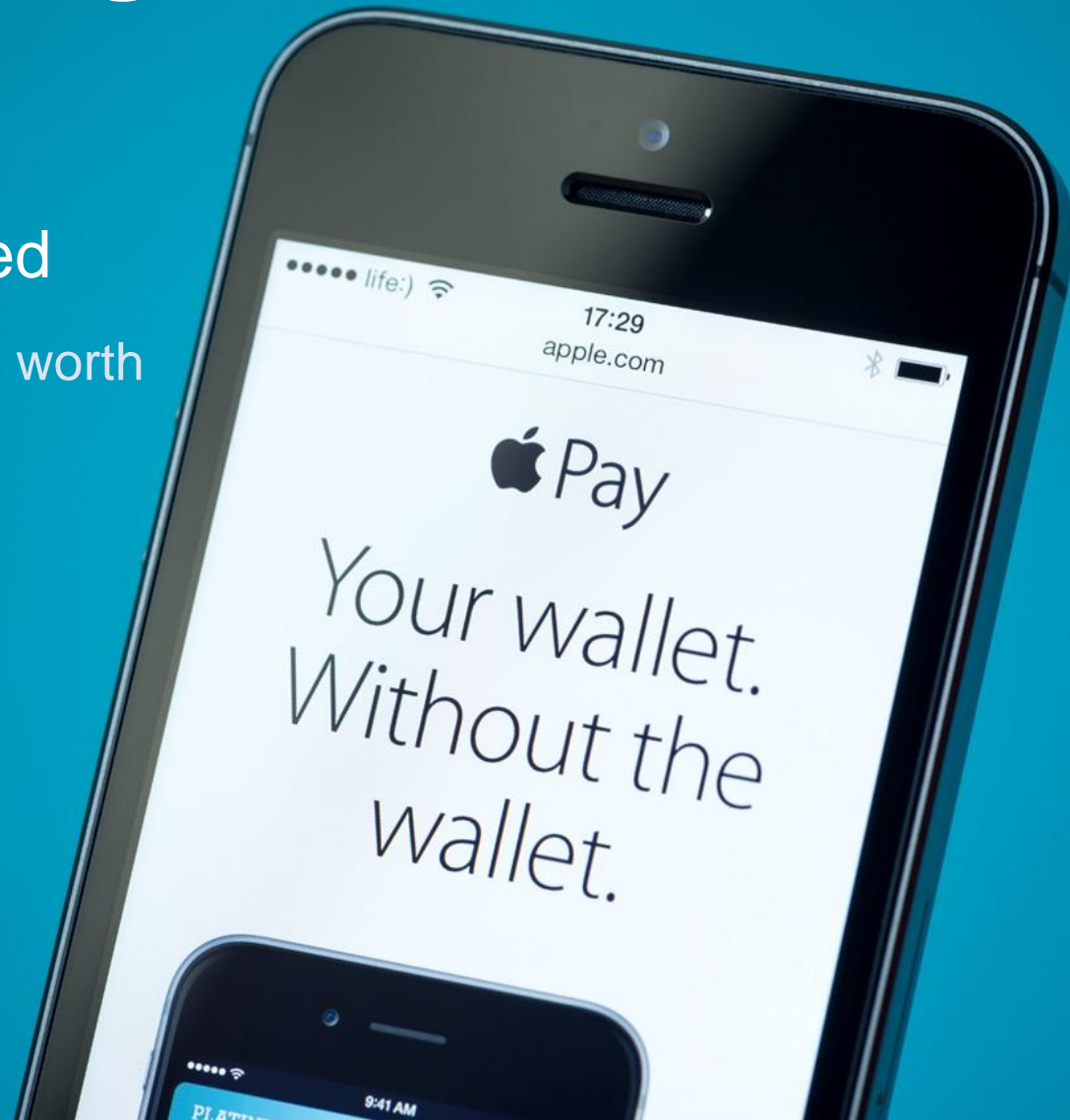
- Invented by British scientist, Tim Berners-Lee in 1989
  - More than four billion people now use it
  - Over 45 billion web pages have been written
- Every British business needs people with an understanding of how computing can help them





# Game-changing E-commerce

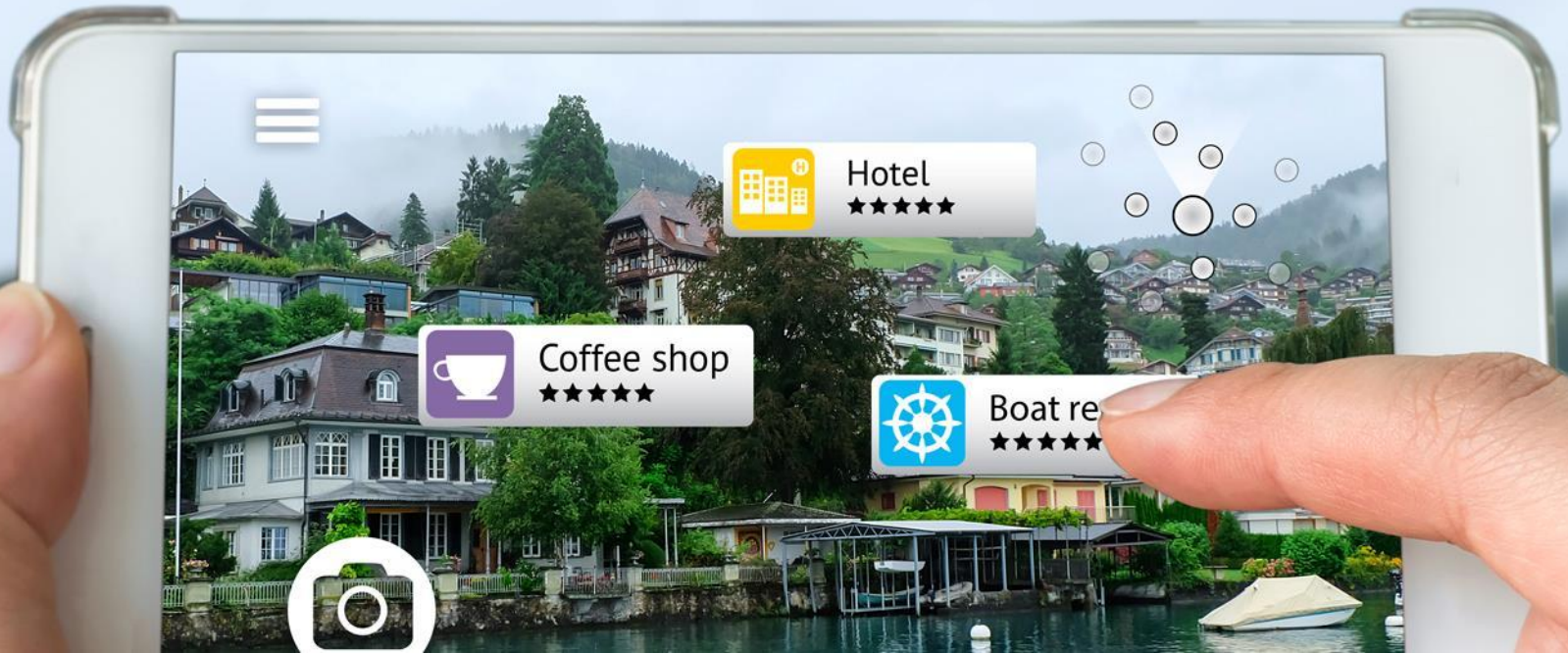
- Shopping has been transformed since the web was invented
  - Online shopping was worth £1 trillion in 2014
  - It grew to £4.2 trillion in 2021
- Want to know how it works?





# Augmented reality

- By adding information to the world we can:
  - add reviews on shops and cafés as we see them
  - utilise a heads-up display when driving
  - or play Pokémon Go



# Entrepreneurs & start-ups

- It took just three people to create Snapchat
  - Bobby Murphy was the programmer who coded the app
- Within four years the software was sending six billion videos per day
  - Most entrepreneurs can't imagine having made it without a knowledge of IT and Computer Science



# Big companies in the UK

- Major international companies are present in the UK and looking for bright new talent
  - Google
  - Microsoft
  - Apple
  - Samsung
  - Facebook





# A strong games industry

- The UK is well known for its games development
- The following were all made in the UK:
  - Grand Theft Auto (Edinburgh)
  - Elite Dangerous (Cambridge)
  - Candy Crush (London)
  - Batman: Arkham (London)
  - Sonic Forces (Leamington Spa)
  - Burnout Paradise (Guildford)





# Course content – OCR

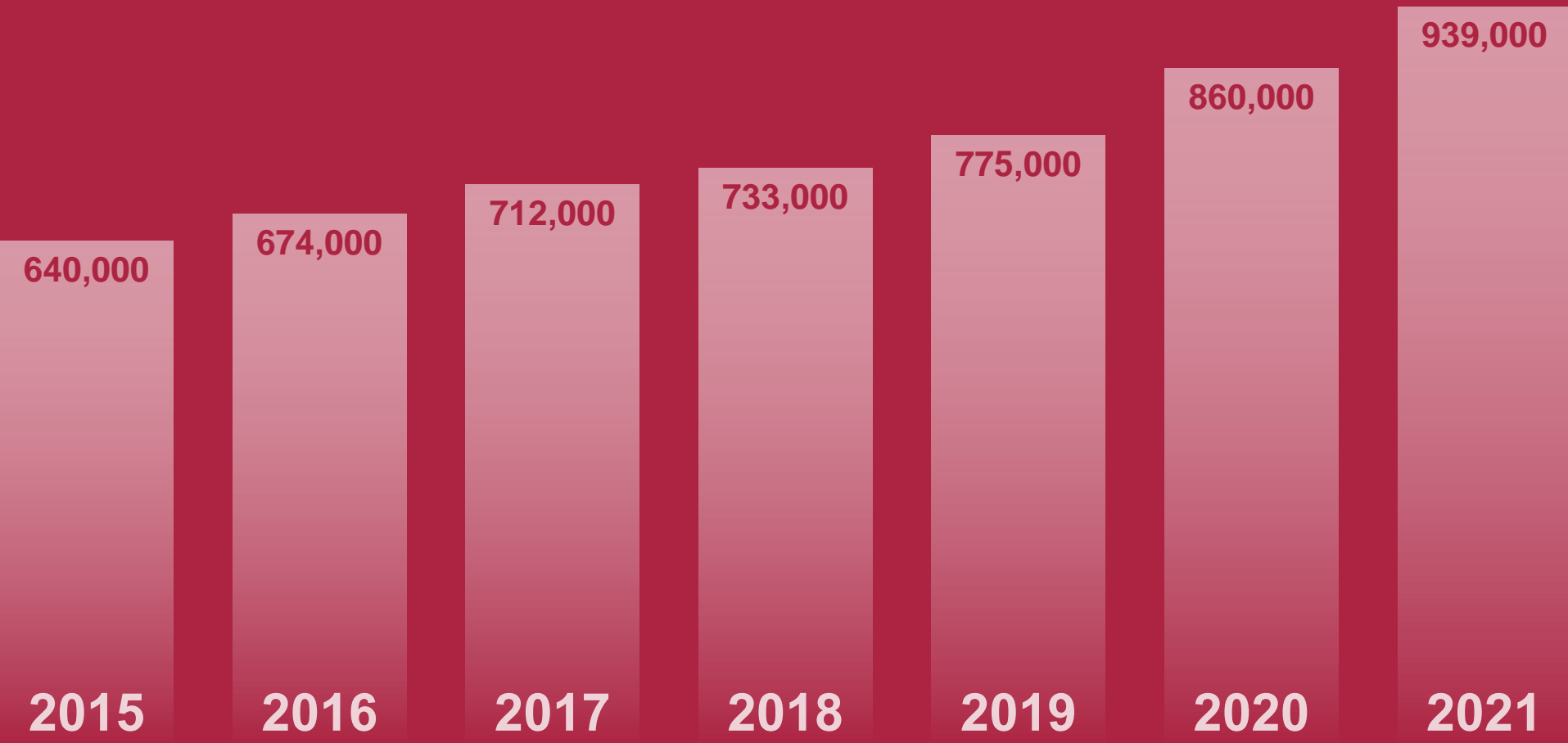
- The GCSE is assessed through two external exams
  - Each exam is worth 50%
- There will be ample opportunity to program during the course
  - You will be given a programming task to complete, but the marks won't count which takes the pressure off you as you code

# What will I learn?

- This GCSE will equip you with a range of transferable practical and theoretical skills:
  - Programming skills in a modern language
  - An understanding of how computers and networks work
  - Knowledge of cyber-security and how hackers attack systems

# Equip yourself for success

- IT, programming and computer services have an ever-growing number of jobs in the UK



# Will you make the next BIG app?





# Big careers in...

A word cloud of career-related terms in various colors and sizes on a dark blue background. The most prominent word is 'Robotics' in large white font. Other significant words include 'Entrepreneur' in green, 'Cyber-Security' in white, 'Future careers' in orange, 'Web' in red, 'Programming' in orange, 'App' in red, 'Systems engineer' in green, 'Design' in orange, 'Games' in green, 'Data analysis' in orange, 'UX/UI' in orange, and 'Consultant' in white. Smaller words include 'electronics' in orange and 'analysis' in orange.

Systems engineer  
Design **Robotics**  
**Future careers** electronics  
Games **Web** Cyber-Security  
Data **Entrepreneur** App  
analysis UX/UI Programming  
Consultant

The world needs **YOU**  
to help develop the future.

**Are you in?**

# DID YOU KNOW ?

2023