

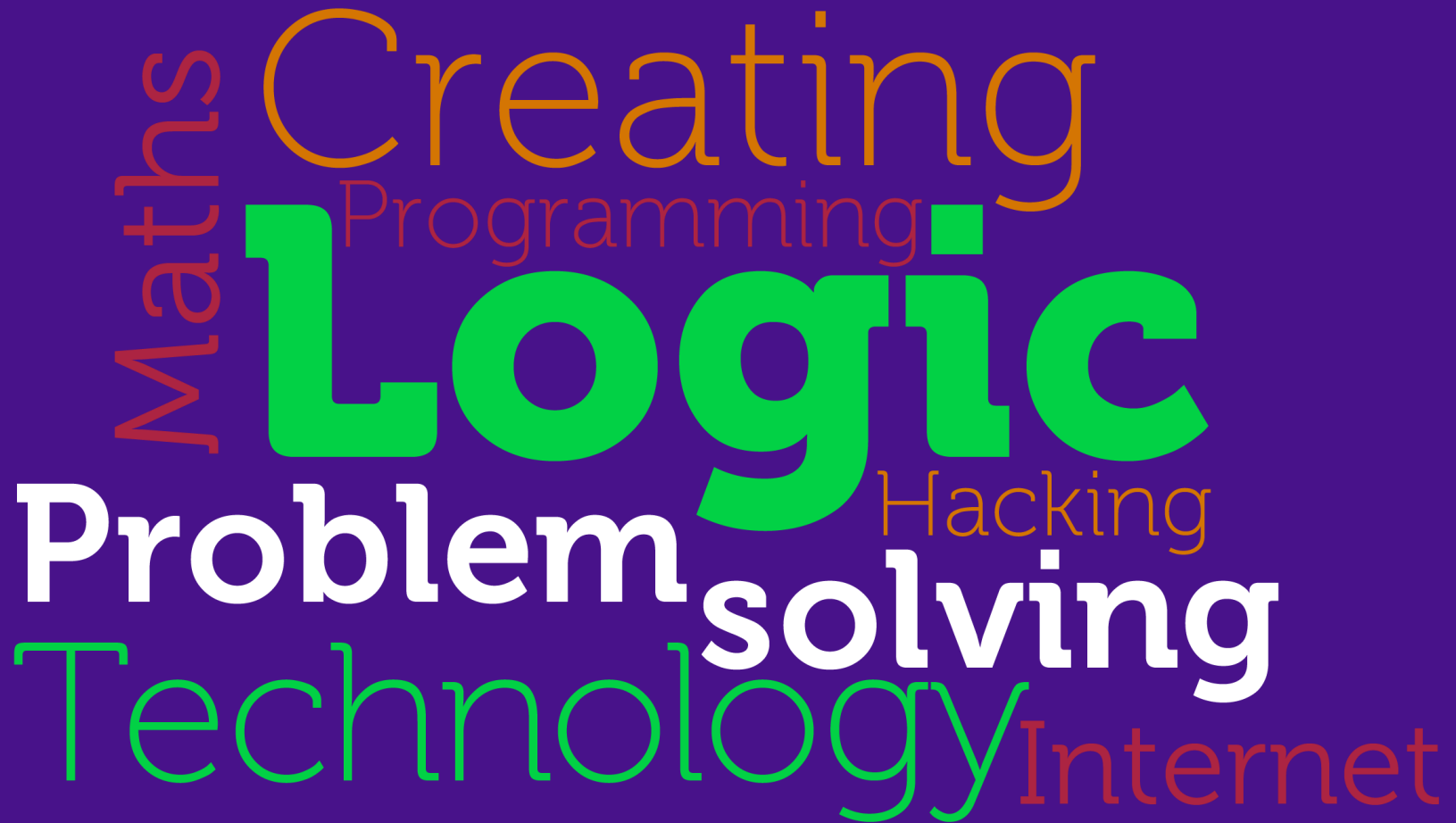
Options talks

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# GCSE

## Computer Science

# Do you like...?

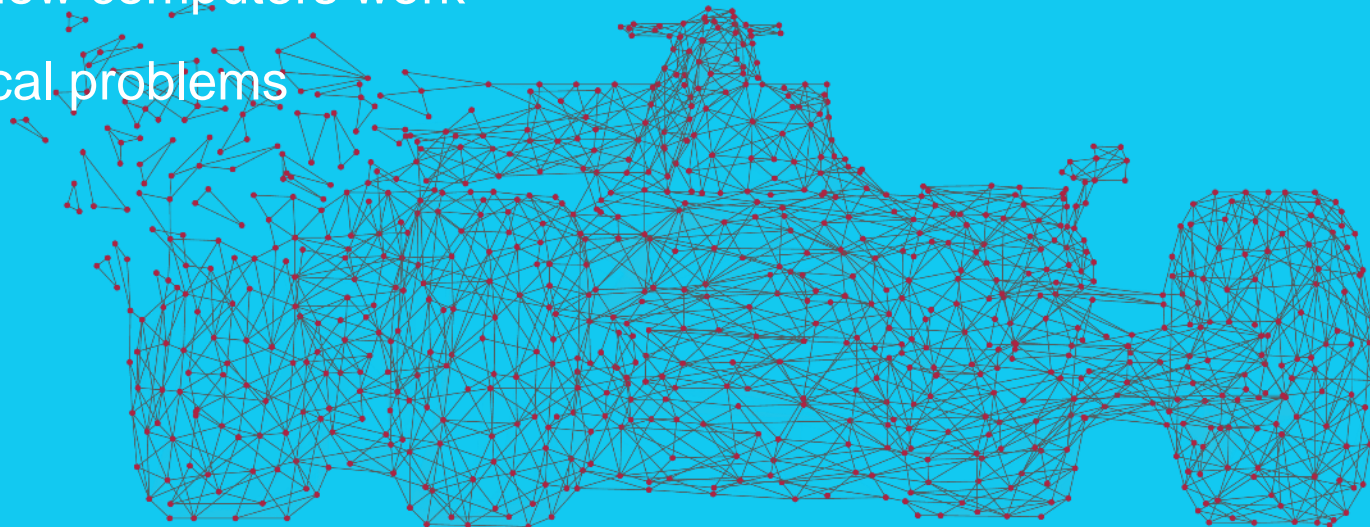


A word cloud on a purple background featuring various computer science and technology-related terms. The words are arranged in a cluster, with 'Logic' being the largest and most central. Other prominent words include 'Creating', 'Problem solving', 'Technology', 'Maths', 'Programming', 'Hacking', and 'Internet'. The words are in different colors: orange, green, white, and red.

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

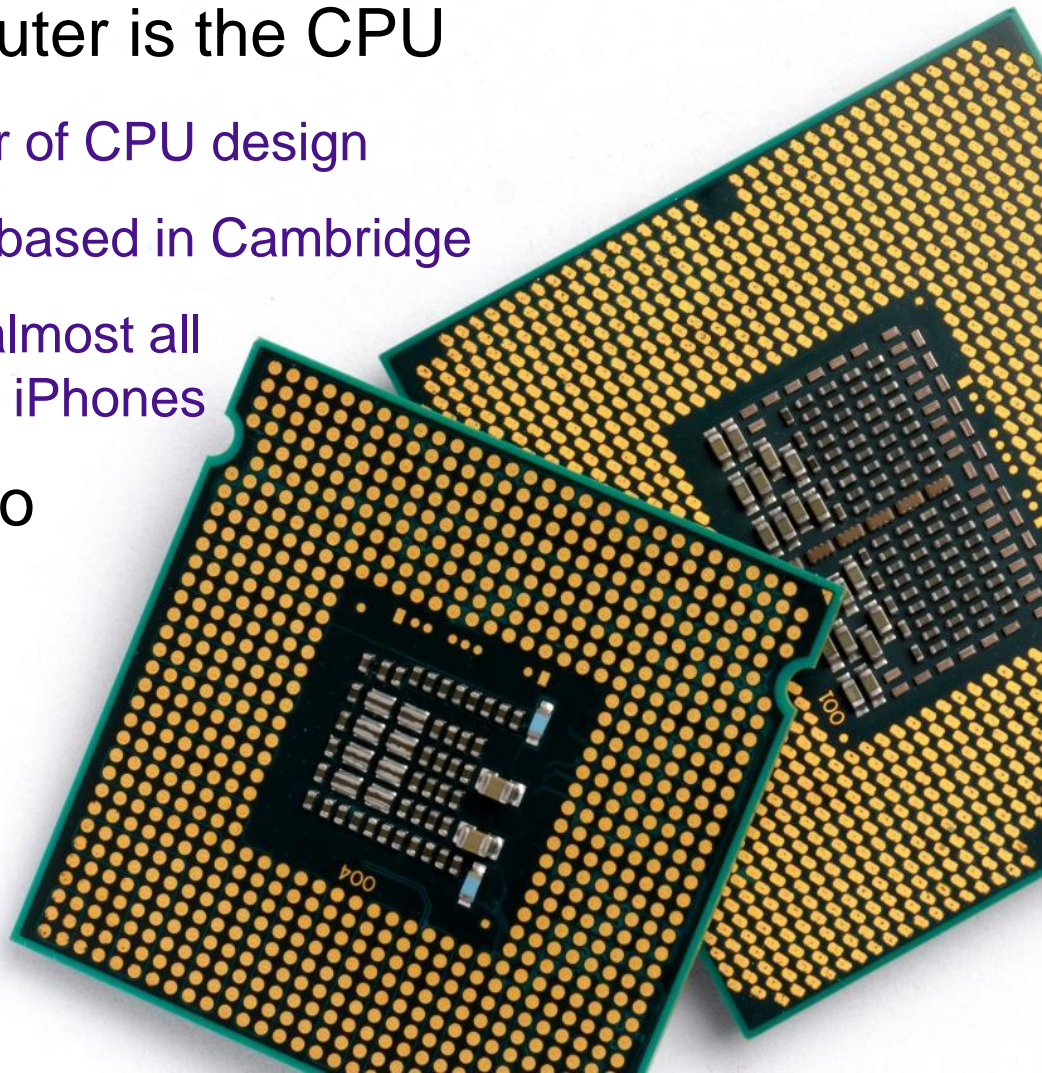
# Why choose CS?

- 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?



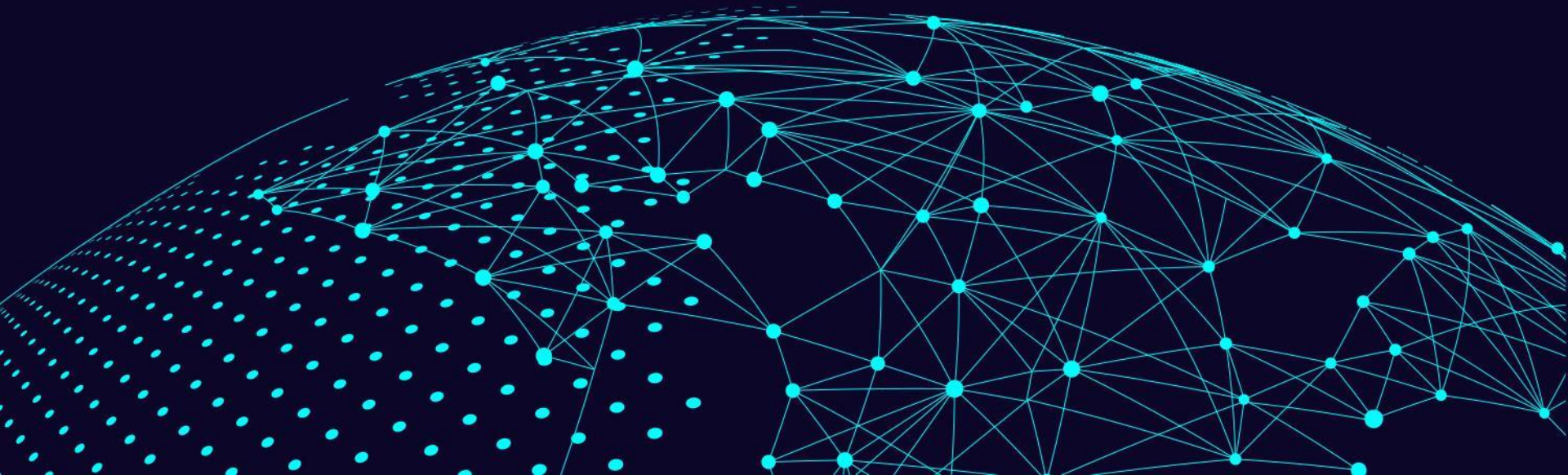
# Robotics

- 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

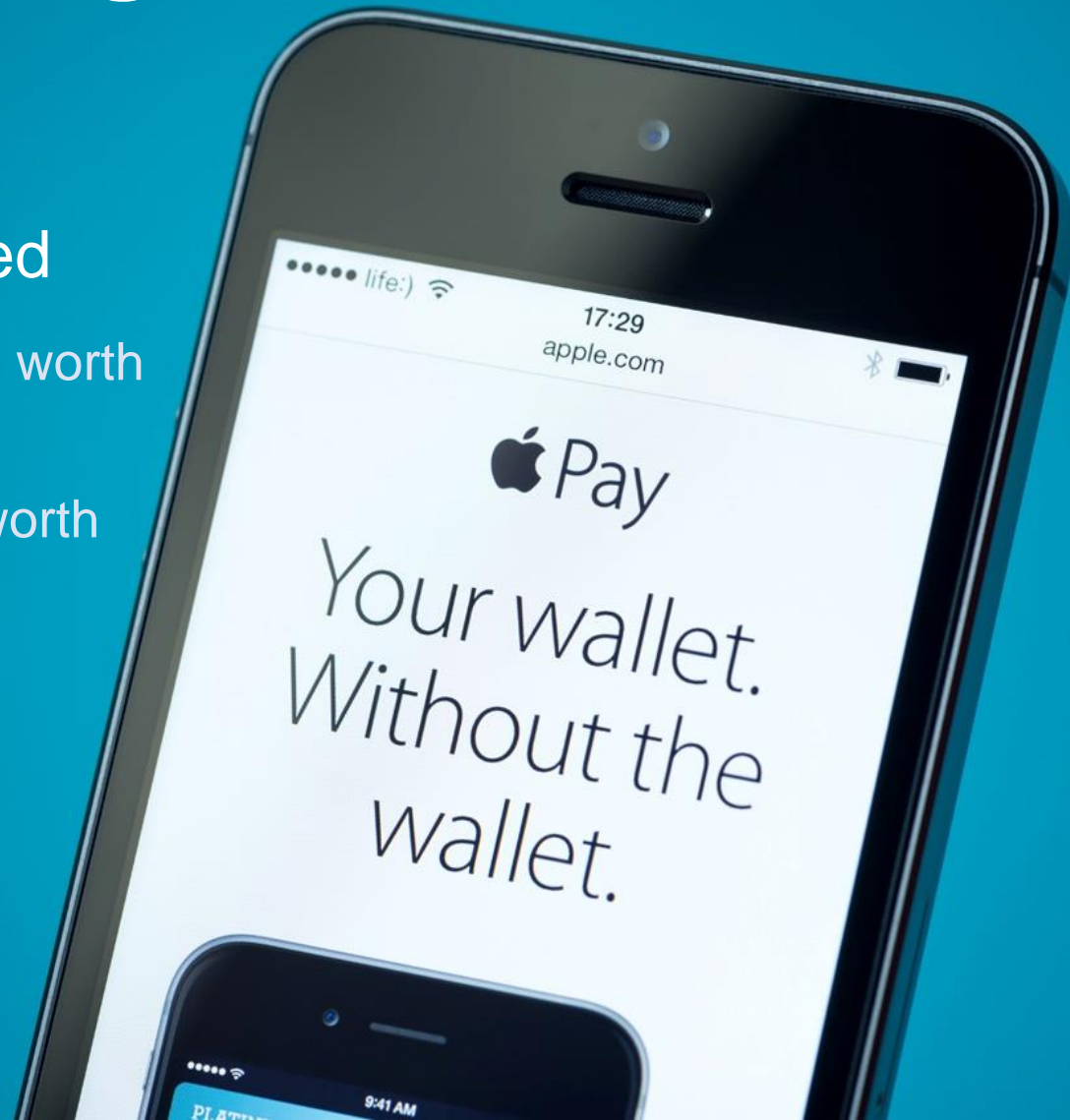
- Invented by British scientist, Tim Berners-Lee in 1989
  - More than four billion people now use it
  - Over 45 billion web pages have been written
- Every British business needs people with an understanding of how computing can help them





# Game-changing E-commerce

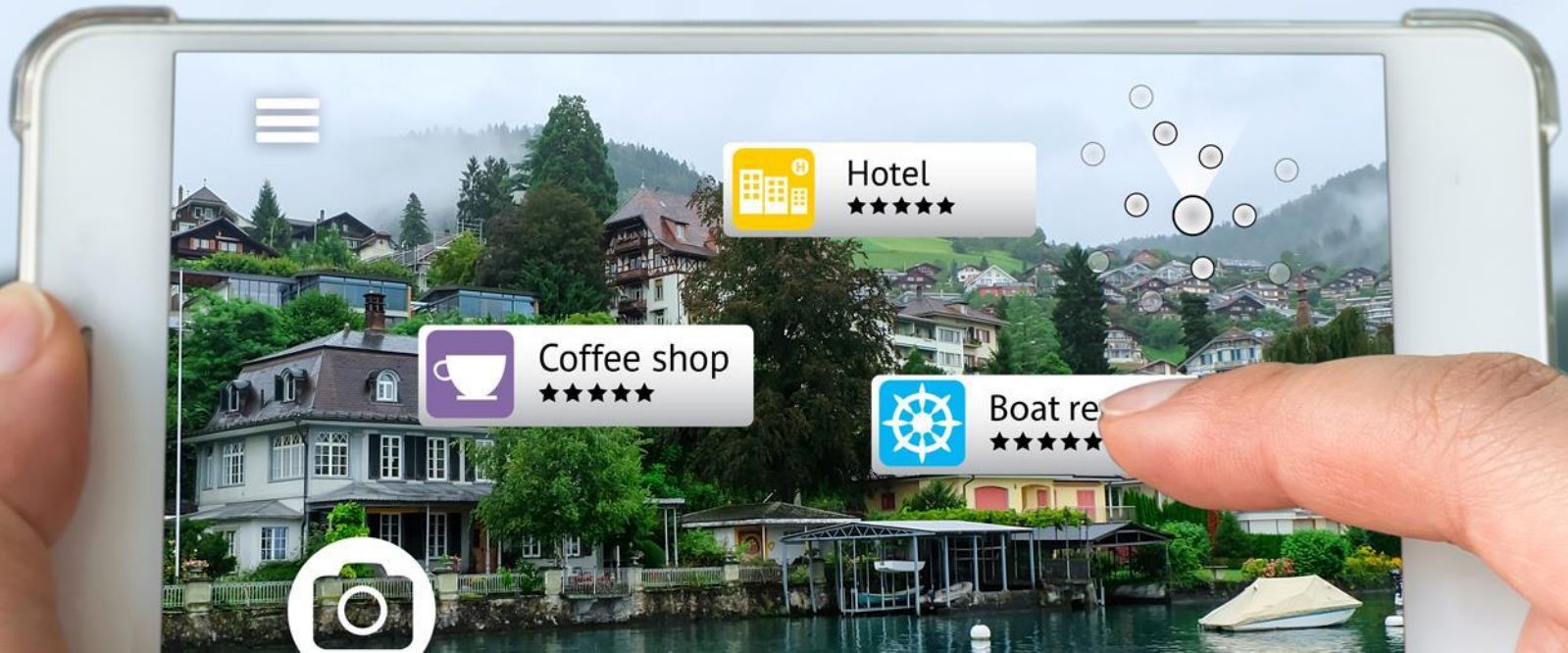
- Shopping has been transformed since the web was invented
  - Online shopping was worth £1 trillion in 2014
  - It is predicted to be worth £3.7 trillion by 2021
- Want to know how it works?





# 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)





# OCR GCSE Computer Science Course Content

1.1 Systems architecture

1.2 memory and storage

1.3 Computer networks,  
connections and protocols

1.4 Network security

1.5 Systems software

1.6 Ethical, legal, cultural and  
environmental impacts of digital  
technology

2.1 Algorithms

2.2 Programming  
fundamentals

2.3 producing robust programs

2.4 Boolean logic

2.5 Programming languages  
and IDE

## **Practical Programming**

**You will be given a programming task to complete,  
but the marks won't count which takes the pressure off you  
as you code**

# OCR GCSE Computer Science Assessment

## **J277/01: Computer systems**

Written paper:

1 hour and 30 minutes

50% of total GCSE 80  
marks

## **J277/02: Computational thinking, algorithms and Programming**

Written paper:

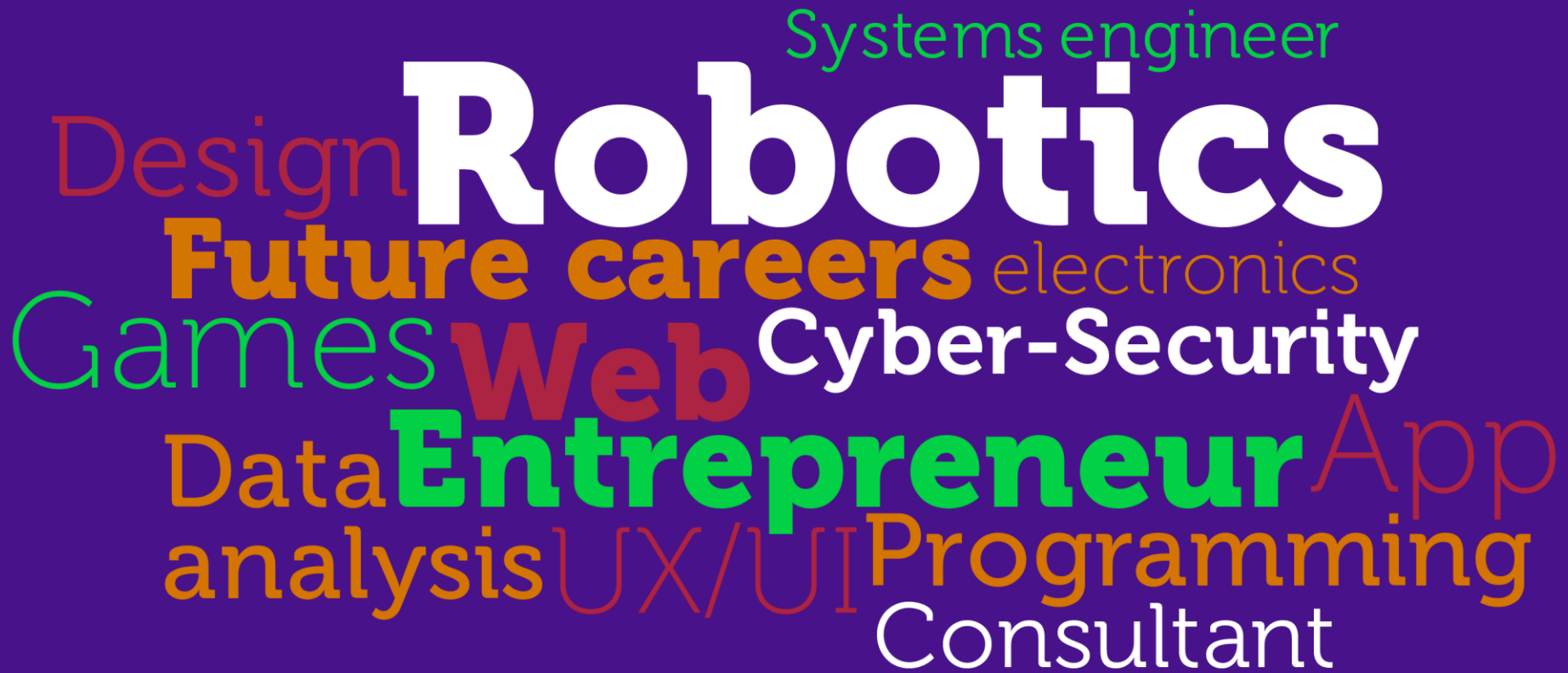
1 hour and 30 minutes

50% of total GCSE 80  
marks

# Will you make the next BIG app?



# Big careers in...



A word cloud on a purple background featuring various computer science careers. The words are in different colors and sizes, with 'Robotics' being the largest and most central. Other prominent words include 'Entrepreneur', 'Cyber-Security', 'Future careers', 'Web', 'Programming', 'App', 'Data analysis', 'UX/UI', 'Consultant', 'Games', 'Design', and 'Systems engineer'.

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



# Are you in?

**Speak to any of your  
Computing Teachers:**

**Mrs Bemowski**

**Mr Bemowski**

**Mr Darbyshire**

**Mr Choi**

**Email: [db@phs.cheshire.sch.uk](mailto:db@phs.cheshire.sch.uk)**