

AQA GCSE (8525)

SLR 1 Systems architecture

All files needed for this topic are in this folder.

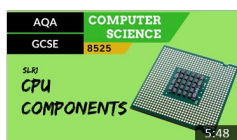
It covers: Four areas from 3.4.5 from the specification

In this folder you will find:

- Lesson overview PowerPoints providing you with a structure for each topic
- Workbook for students to complete
- Workbook model answer for teachers
 - These can be printed out in hardcopy at 4-slides per page double-sided and make great knowledge organisers for your students
- End of topic test (out of 20)
- Additional resources as required

Theory coverage

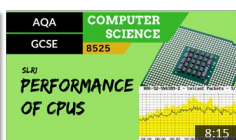
With Craig'n'Dave resources you do not need to teach the content of the course from the front of the class. That is why we don't include PowerPoints of the theory. Instead you set students a video to watch ahead of the lesson from our YouTube channel: www.youtube.com/craigndave and advise them to pause the video when they see the notes icon. They record this key theory in an exercise book that they bring to the lesson to help them complete the theory activities. The entire specification is covered point by point in these videos.



GCSE SLR1 CPU components and their function



GCSE SLR1 Von Neumann architecture



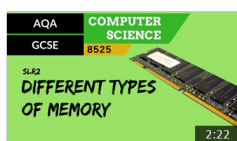
GCSE SLR1 Performance of CPUs



GCSE SLR1 Purpose of the CPU



GCSE SLR1 Embedded systems



GCSE SLR2 Different types of memory



GCSE SLR2 RAM and ROM



GCSE SLR2 The need for secondary storage



GCSE SLR2 Common types of storage



GCSE SLR2 Adv. and dis. of secondary storage



Additional resources

Don't forget that your subscription comes with full access to all our additional resources. These can be found under the "Other GCSE Level Resources" page (green tile) within your premium site. These include:

- Programming resources
- Delivery guides / calendars
- Key terminology databases
- Pseudo code cheat sheet
- And lots more...

GCSE COMPUTER SCIENCE CALENDAR 2016-17			
YEAR 10			
Week	Date	Lesson	
1	05/09/2016	Introduction Lesson	1.1 Lesson 1
2	12/09/2016	1.1 Lesson 2	1.1 Lesson 2
3	19/09/2016	Programming	1.1 Lesson 3
4	26/09/2016	1.2 Test	1.2 Lesson 1
5	03/10/2016	1.2 Lesson 2	1.2 Lesson 2
6	10/10/2016	1.2 Lesson 3	1.2 Lesson 3
7	17/10/2016	1.3 Lesson 1	1.3 Lesson 1
Half Term			
1	31/10/2016	1.3 Test	1.3 Lesson 2
2	07/11/2016	1.4 Lesson 1	1.4 Lesson 1
3	14/11/2016	1.4 Lesson 2	1.4 Lesson 2
4	21/11/2016	1.4 Lesson 3	1.4 Lesson 3
5	28/11/2016	1.4 Test	1.4 Lesson 4
6	05/12/2016	Programming	1.4 Lesson 5
7	12/12/2016	Programming	1.4 Lesson 6
Christmas			
1	02/01/2017	1.5 Lesson 1	1.5 Lesson 1
2	09/01/2017	1.5 Lesson 2	1.5 Lesson 2
3	16/01/2017	1.5 Lesson 3	1.5 Lesson 3
4	23/01/2017	Programming	1.5 Lesson 4
5	30/01/2017	1.5 Test	1.5 Lesson 5
6	06/02/2017	Programming	1.5 Lesson 6
Half Term			
1	20/02/2017	1.6 Lesson 1	1.6 Lesson 1
2	27/02/2017	1.6 Lesson 2	1.6 Lesson 2
3	06/03/2017	1.6 Lesson 3	1.6 Lesson 3
4	13/03/2017	1.6 Test	1.6 Lesson 4
5	20/03/2017	1.7 Lesson 1	1.7 Lesson 1
6	27/03/2017	1.7 Lesson 2	1.7 Lesson 2
7	03/04/2017	1.8 Lesson 1	1.8 Lesson 1
Easter			
1	24/04/2017	1.8 Lesson 2	1.8 Lesson 2
2	01/05/2017	1.8 Lesson 3	1.8 Lesson 3
3	08/05/2017	1.8 Lesson 4	1.8 Lesson 4
4	15/05/2017	Programming	1.8 Lesson 5
5	22/05/2017	1.9 Lesson 1	1.9 Lesson 1
Half Term			

GCSE 8525 SLR1 | Systems architecture

About the CPU

The CPU has a number of major components, they are:

Component name: Arithmetic Logic Unit (ALU) Control Unit (CU)

Role / Purpose: This component performs calculations, e.g. addition/subtraction and logical decisions, e.g. does this equal...? This component decodes instructions and sends signals to control how data moves around the CPU.

Component name: Bus Clock

Role / Purpose: These are a collection of wires through which data is transmitted from one component to another. The electronic unit that synchronises related components by generating pulses at a constant rate.

The CPU also makes regular use of Registers, what are these? A collect of small, super areas of memory onboard the CPU, which can be accessed/used by the various other components.

The CPU also makes regular use of Main Memory, what is this? This memory provides fast access to frequently used instructions and data without having to go to the main memory (RAM).

A diagram of the CPU:

The diagram shows a central CPU block with a clock icon. Inside the CPU, there are several components: an ALU (Arithmetic Logic Unit) with mathematical symbols, a CU (Control Unit) with a clock icon, and a set of Registers. These are connected by a Bus. The CPU is connected to Main Memory via another Bus.

STARTER

The toy railway

It is quicker to get

The processor core, cache

The diagram shows a toy railway system with various components like tracks, signals, and a train. It is used as a metaphor for a computer system.

Our pedagogy

Read more about our pedagogy here:

<http://craigndave.org/our-pedagogy/>

We also have some YouTube videos which explain how to get the most out of our "Structured Learning Records" for assessment as well more about the flipped classroom approach:

<https://www.youtube.com/watch?v=IXo5FS7JXUw&list=PLCiOXwirraUBEEFcJfSQgE2P-pcor9b9c>

More reasons to teach with Craig'n'Dave

Find out more about why we think our resources are the best available for delivering GCSE Computer Science here: <http://craigndave.org/why-teach-with-craigndave-resources>

If you have any issues opening any of the files, or experience any other problems, please email support@craigndave.org

We always welcome your feedback. Please send any to support@craigndave.org