

OCR A LEVEL – SLR 3 INPUT, OUTPUT AND STORAGE

All files needed for this topic are in this folder.

It covers: 1.1.3a – 1.1.2d from the AS Level specification
 1.1.3a – 1.1.3d from the A Level specification

It contains the following three sub-folders:



Contains all the activities for you to share with your students.
We often provide **more** activities than your students could reasonably complete in the time provided.
We constantly improve and add to our bank of activities for each SLR, so please check each year for the latest updates!
Pick and choose the most appropriate activities for your students as required.



Contains all the activities **plus** model answers.
For you to use as you see fit.
Ideal for displaying at the front of the class.



Contains the Structure Learning Records for your students to fill out as they carry out the activities above.
These provide your method of assessment. There is a video in this folder explaining how to get the most out of our SLRs.
Contains answers to the exam questions set in the SLRs.

If you wish to follow our dedicated scheme of learning and delivery calendars these can be downloaded separately from your premium resources login by selecting the following tile:

- Other A level Resources

For guidance on how to formally assess your students at the end of this topic and to get the most out of our Structured Learning Records (SRLs) please check out the following video on our YouTube channel:



[🔗 Assessment with Craig'n'Dave – \(AS/A Level\)](#)



README – Getting the most out of our resources

Theory coverage

With Craig 'n' Dave resources, you do not need to teach the content of the course from the front of the class. Instead, you set students a video to watch ahead of the lesson from our student page:

student.craigndave.org

Advise them to pause the video and make notes in an exercise book that they bring to lessons to help them complete the theory activities. The entire specification is covered point by point in these videos.

The screenshot shows the website interface for 'Craig 'n' Dave For Students'. At the top, there is a navigation bar with a power button icon, the text 'Craig 'n' Dave For Students', and links for 'Shop' and 'Videos'. Below this is a red banner with the text 'OCR A Level H046/H446 Videos'. A paragraph below the banner reads: 'To make the most of our videos, we recommend using the Cornell method of note taking. You can read more about it on the [Cornell note taking page](#) on our website.' Below this is a grid of 10 video thumbnails, each with a white icon on a purple background and a title below it:

- SLR01 – Structure and function of the processor (AS & A'Level)
- SLR02 – Types of processor (AS & A'Level)
- SLR03 – Input output and storage (AS & A'Level)
- SLR04 – Operating systems – Systems software (AS & A'Level)
- SLR05 – Application generation (AS & A'Level)
- SLR06 – Software development (AS & A'Level)
- SLR07 – Types of programming language (A'Level Only)
- SLR08 – Introduction to programming (AS Level Only)
- SLR09 – Compression encryption and hashing (A'Level Only)
- SLR10 – Databases (AS & A'Level)

If you wish to deliver our theory videos in a more traditional approach however we also provide them as PowerPoints file. These can be downloaded from your premium resources login.



README – Getting the most out of our resources

Additional resources

Don't forget, your subscription comes with full access to all our additional resources. These can all be downloaded from your premium resource's login. These include:

- Programming resources (Python, C#, T.I.M.E, Defold games development)
- Delivery guides/calendars
- Teacher marking checklist
- AS recap lessons to use in year 13 before embarking on new material
- Key terminology databases
- Student revision checklists
- Computational thinking exercises
- "Those little extras" pack
- PDF copy of our "Essential algorithms and data structures" book from Amazon
- PDF copy of our "Documenting Defold programming projects OCR H446" book from Amazon
- Cheat sheets

Network and the internet

Understand physical star topology and logical bus network topology
Differentiate between them and explain their operation

2. Using the items shown here, construct a diagram that shows your understanding of a physical star topology.

Internal computer architecture

Understand the basic components of a computer system
Each other: • processor • main memory • address bus • data bus • control bus • I/O controllers
In particular, understand the concept of a bus and how address, data and control buses are used

Use a line connector shape to join them together.
Value = execute

more than one colour?

- Stores the address of the next instruction to be fetched
- Stores the address of the instruction or data to be fetched
- Stores data read from or being written to the RAM
- Stores the instruction currently being executed

Week	Lessons	File
1	1	
2	2	SLR1-4.111
3	3	SLR1-4.116,7
4	4	Programming
5	5	SLR2-4.119
6	6	SLR2-4.119
7	7	SLR1-4.123
8	8	SLR1-4.123
9	9	SLR4-4.241
10	10	SLR4-4.241
11	11	SLR4-4.241
12	12	SLR4-4.241
13	13	SLR4-4.241
14	14	SLR4-4.241
15	15	SLR4-4.241
16	16	SLR4-4.241
17	17	SLR4-4.241
18	18	SLR4-4.241
19	19	SLR4-4.241
20	20	SLR4-4.241
21	21	SLR4-4.241
22	22	SLR4-4.241
23	23	SLR4-4.241
24	24	SLR4-4.241
25	25	SLR4-4.241
26	26	SLR4-4.241
27	27	SLR4-4.241
28	28	SLR4-4.241
29	29	SLR4-4.241
30	30	SLR4-4.241
31	31	SLR4-4.241
32	32	SLR4-4.241

2. Describe what each of the following higher-order functions do. [6]

Map:

Filter:

Fold or Reduce:

3. What would be the result of making the following function calls? [9]

fold (*) 2 [1,2,3]

filter (>10) [7,3,10,11,4,32,9]

map (x -> x * 5) [0,5,10,15]

Minimum expectations and learning outcomes

- Terms 346-349 from A Level Key Terminology should be included and defined.
- Provide an example of a simple program you have written in a functional programming language.
- Show an understanding of what a higher-order function is and show your understanding of the following higher-order functions: map, filter and reduce or fold.
- Show your understanding of the following list processing operations by providing annotated examples of some simple functional programs: return head of list, return tail of list, rest for empty list, return length of list, construct an empty list, prepend an item to a list, append an item to a list.
- Answer the exam questions.

Breadth	Depth	Presentation	Understanding
<input type="checkbox"/> All	<input type="checkbox"/> Analytical	<input type="checkbox"/> Excellent	<input type="checkbox"/> Excellent
<input type="checkbox"/> Most	<input type="checkbox"/> Explained	<input type="checkbox"/> Good	<input type="checkbox"/> Good
<input type="checkbox"/> Some	<input type="checkbox"/> Described	<input type="checkbox"/> Fair	<input type="checkbox"/> Fair
<input type="checkbox"/> Few	<input type="checkbox"/> Identified	<input type="checkbox"/> Poor	<input type="checkbox"/> Poor

Comment and action required

README – Getting the most out of our resources

Our pedagogy

Read more about our pedagogy here:



craigdave.org/our-pedagogy

We have additional videos which you might find useful which explain the Flipped Classroom method of teaching on our YouTube channel:



youtube.com/watch?v=ErJIJ5xhW-M&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 A Level Computer Science here:

craigdave.org/why-teach-with-craigdave-resources

If you have issues opening any of the files or experience any other problems, or you just want to ask us a question / provide feedback feel free to email us:



admin@craigdave.co.uk