

National 5 Computing Science

N5

Family Learning

Welcome!

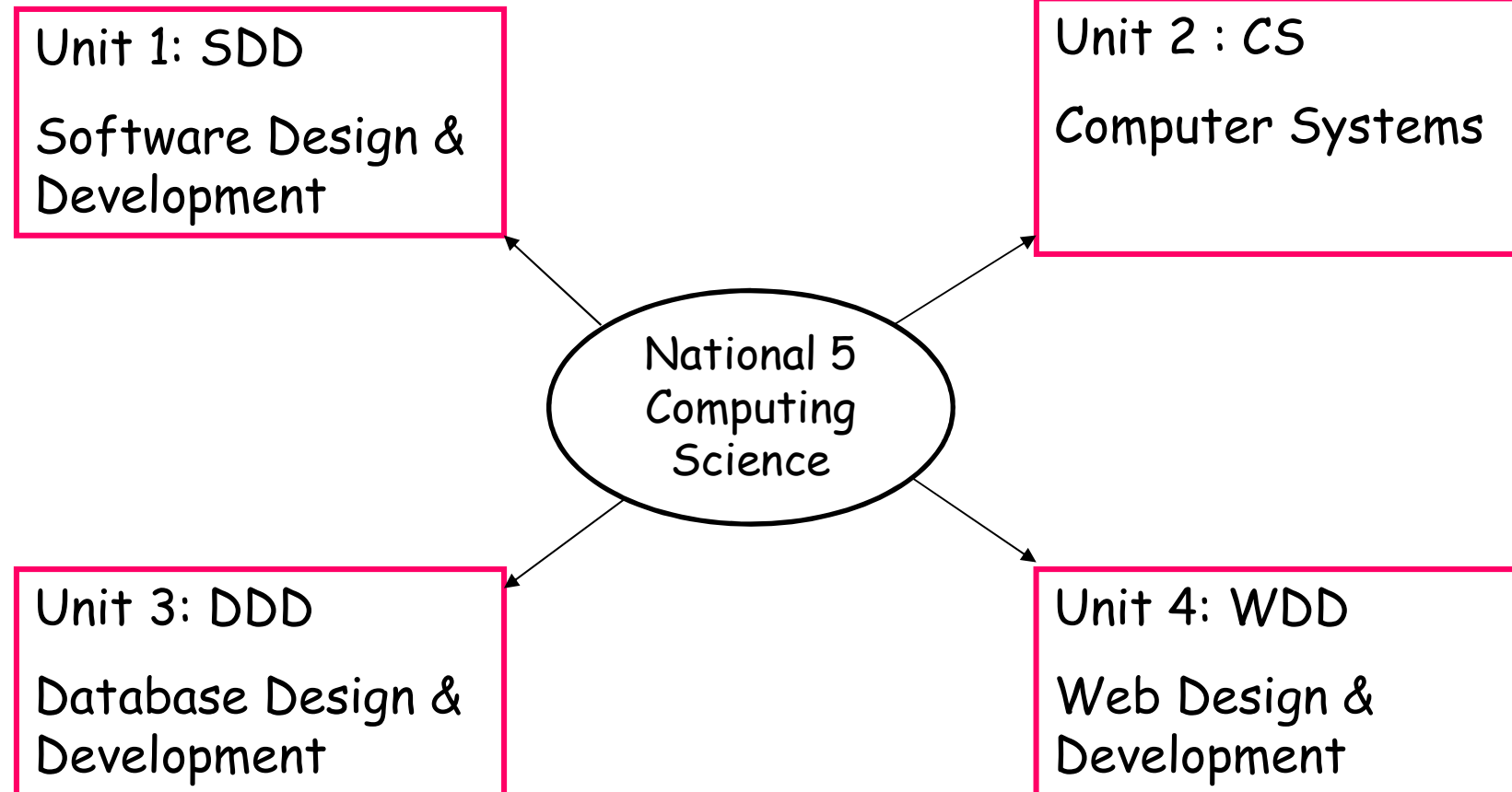
Learning Intentions

- ✓ Explain the course structure
- ✓ Explain the course assessment
- ✓ Identify key subject milestones
- ✓ Demonstrate how to answer a National 5 Computing Science question
- ✓ Answer any questions relating to the course

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4 Units of study



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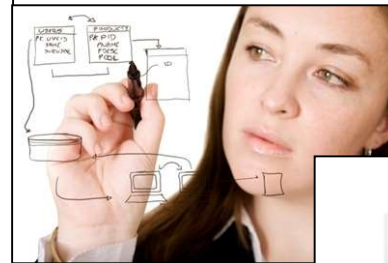
The Course

The course contains 4 units of study.

Unit 1 is called Software Design and Development (SDD).

Pupils will learn about

- the software development process
- designing programs
- coding programs
- testing programs
- evaluating programs



```
243 void ProgramManager::RecallProgram() {
244     string name;
245     bool searching = true;
246     while (searching) {
247         cout << "Enter name of program: ";
248         cin >> name;
249         if (ProgramNameIsValid(name)) {
250             if (ProgramFileExists(name)) {
251                 Program thisProgram;
252                 thisProgram.SetName(name);
253                 Read(thisProgram);
254                 WriteToScreen(thisProgram);
255                 searching = false;
256             }
257             else if (ProgramExists(name)) {
258                 WriteToScreen(programs[ProgramIndex(name)]);
259                 searching = false;
260             }
261             else if (EndingRecall(name))
262                 searching = false;
263         }
264     }
265 }
266
267
```

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The Course

Unit 2 is called Computer Systems

Pupils will learn about:

- Data representation
- Computer structure
- Environmental impact
- Security Precautions



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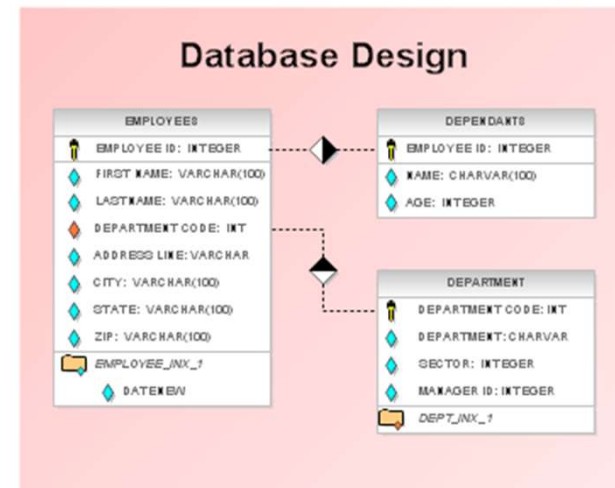
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The Course

Unit 3 is called Database Design & Development

Pupils will learn how:

- to design a database
- to implement a database
- to use linked tables
- to draw ERD diagrams
- to write SQL



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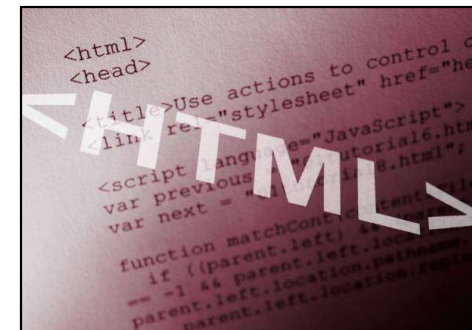
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The Course

Unit 4 is called Web Design & Development

Pupils will learn

- how to design a web page using wireframes.
- how to code a web page using HTML tags
- how to put style onto a web page using CSS



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Course Assessment

The National 5 Computing Science course is assessed in 2 ways:

Assignment
(50 marks - 31%)

8 hours assignment
3 independent tasks

Database
Web Page
Program

Externally marked by SQA
Open book
No teacher help

Question Paper
(110 marks - 69%)

2 hour exam paper in the hall
marked by SQA

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Course Assessment

Question Paper Mark and Assignment added together to give total mark out of 160.

Percentage worked out then Grade awarded, roughly based on:

$\geq 70\%$ A

$\geq 60\%$ B

$\geq 50\%$ C

$\geq 40\%$ D

$< 40\%$ No Award

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Course Milestones

End of each unit of study

End of Topic Assessment

End of Nov/Beg of Dec

Course Prelim
(2 hours written paper in the exam hall)

Jan/Feb

Course Practice Assignment

Feb/Mar

Course Assignment
(at this time if there is any candidate not sitting the final exam then they will undertake/complete the N4 course)

National 5 Computing Science Question Paper

The Question Paper is split into 2 sections.

Section 1 has 25 marks and consists of short-answer, restricted response questions. This section allows candidates to demonstrate breadth of knowledge from across the four areas of the course.

Section 2 has 85 marks and consists of structured questions consisting of restricted and extended response. This section allows candidates to demonstrate application of knowledge and understanding when answering appropriately challenging context-based questions from across the four areas of the course.

National 5 Computing Science Specimen Paper Examples - Section 1

1. Convert the following 8-bit binary number into denary. (**1 mark**)

1011 0111

2. The code below monitors the speed of a vehicle:

```
...  
Line 5 RECEIVE speed FROM <sensor>  
Line 6 WHILE speed <= 70 DO  
Line 7     RECEIVE speed FROM <sensor>  
Line 8 END WHILE  
Line 9 SEND signal TO <alarm>
```

Describe what happens in lines 6 to 9 above if the sensor detects a value of 83 at line 5. (**3 marks**)

National 5 Computing Science Specimen Paper Example - Section 2

Specimen Paper Section 2 Question 14 - please see handout.

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Additional Resources

- BBC Bitesize
- SQA Website - Past Papers and Marking schemes
- Text Book - "How to pass National 5 Computing Science" (Hodder Gibson)
- Glow - Computing Science teaching PowerPoints and Summary sheets



National 5 Computing Science Questions

