Programming for GCSE
Topic 8.2: Pseudo Code and Flowcharts
Aims

- Design: what is it about?
- Pseudo code
- Flowcharts
- My views
Design

• Plan
  • Before you build
  • How for s/w?

• Software is a description!

• Steps towards a solution
PSEUDO CODE
Pseudo Code

- Careless or informal code
- Useful for
  - Making a start
  - Breaking a problem done (i.e. design)
  - Algorithms without code

- AQA has defined a syntax
  - *Does this miss the point?*
Example: Shopping List

initialise shopping list and list of purchase
forever
  get command
  if command is 'add'
    get item and add it to shopping list
  if command is 'buy'
    get item; transfer from shopping to purchase list
  if command is 'print'
    print both lists
Statement Block

- Group of instructions
- No jumps
- *Comments!*

- Arrows implicit
  - downwards
  - across
Decision

• Choice of two
• If statement
Example – Largest Value

- Input two numbers
- Output largest

```
start
input X, Y

X > Y
  true
  print X
  false
  print Y

stop
```
Quiz – Flowchart for A Loop

• Pseudo code

While condition
  statement 1
  statement 2

• Equivalent flowchart

\[ \text{Condition} \]

\[ \text{true} \]

\[ \text{Statement 1} \]

\[ \text{Statement 2} \]

\[ \text{false} \]
SYLLABUS
Specification – Algorithms

Candidates should be able to:
(a) understand algorithms (written in pseudocode or flow diagram), explain what they do, and correct or complete them
(b) produce algorithms in pseudocode or flow diagrams to solve problems.

• Also relevant to design in the practical programming activity
Summary

• Flowcharts may be useful for understanding programs
• Pseudo code like code without the syntax errors