

SEAtS: 639851



COMP1202 – Revision

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(adapted from Prof David Millard's slides)

COMP1202 (AY2022-23)

Coming Up

- Key Concepts
 - The Pillars
 - Revising
 - Onwards to Programming 2
- The Exam
 - Topics
- Feedback
- Some Last Words

Part 1

Key Concepts

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The Three Pillars of OOP



Encapsulation Inheritance Polymorphism

What Topics to Revise?

- Lectures
- Labs

Revising

- Remember the online resources
 - Summary Videos + Slides
 - Lecture Recording
 - Blackboard Exercises
- Go back over the labs
 - Check out other online exercises
 - Codingbat.com
- Example Questions Online
 - Accessed via the wiki
- Most past papers (up to AY2016-17) are for a **different type of exams**



The screenshot shows the EdShare interface for a resource titled "Programming Principles: Methods". The page features a video player with a thumbnail of a lecturer in front of a screen displaying "Programming 1 Methods" by Dr. David Millard. To the right of the video, there is a metadata section with the following details:

- Added By:** Dr David Millard
- Date Added:** 17 Oct 2011 11:36
- Creators Name:** Dr David Millard
- Tags:** java, objects, methods, overloading
- Viewing permissions:** World
- Course codes:** COMP1004, COMP1202
- Link:** <http://edshare.soton.ac.uk/id/eprint/7848>

Below the video, there are download options for "Methods.mp4" (455MB) and "Methods.pptx". A "Downloads & Views" section shows a graph icon. At the bottom, there is a "Toolbox" section with a "View Item" button and a "Download as zip" option.

Programming 2

- Graphical User Interface Programming
- Control Flow and the Java Virtual Machine
 - Exceptions
 - Recursion
 - Multi-threading
- Storage and Files in Java
- Validation and Verification (Testing Strategies, JUnit)
- The C programming language



Dr. Jian Shi

Part 2

Exam

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Why Do it This Way?

- The Labs and Coursework test your **practical** skills
- The **exam** is designed to test your **intellectual skills**
- It is worth **40%** of your overall mark

Format for AY2022-23

- You have **2 hours (120 mins)**
- **Closed book, Computer Assisted Assessment (tentative)**
- Experience shows that in MCQ exams there is a big difference in completion times
 - Don't worry if it takes you to the end of the time
- When: **09:30 15th Jan. 2024**
 - <https://www.southampton.ac.uk/studentadmin/assessment/exam-timetables/index.page>

Choose the **Best** Answer

- Most questions are multiple-choice
 - You choose the **best answer** out of the selection

Which of the following is the most accurate statement. Java programmers indent lines in their code because... [1 mark]:

- It helps an IDE run the debug process
- It makes the code easier to read
- The compiler requires statements within control sequences to be indented
- The compiler uses whitespace, including tabs, to help identify statements
- It makes it easier to cut and paste sections of code

No Negative Marks

- Some questions are multiple responses. There are no negative marks!

When overloading a method which of the following statements are the most accurate (select up to two answers) [2 marks]:

- The methods must be next to one another in the class
- The methods should have similar functionality
- The methods should not call one another
- The methods cannot have the same name
- The methods cannot have the same return type
- The methods cannot have the same number of parameters
- The methods cannot use the same types of parameters
- The methods cannot have the same number and type of parameters

Matching Questions

- Some questions will require you to select from a list.

Consider the following code [4 marks]:

```
1      void sumArray(int[] values) {  
2          int total = 0;  
3          for(int entry : values) {  
4              total += entry;  
5          }  
6          return total;  
7      }
```

- `sumArray` on line 1 is an example of
- `values` on line 1 is an example of
- `total` on line 2 is an example of
- `int` on line 3 is an example of

Options:

1. Class
2. Local variable
3. Member variable
4. Method
5. Primitive Type
6. Parameter
7. Argument

Split Questions

- Some questions will repeat a previous stimulus.

Consider the following code [1 mark]:

```
1    void sumArray(int[] values) {
2        int total = 0;
3        for(int entry : values) {
4            total += entry;
5        }
6        return total;
7    }
```

Assuming an int array containing {1,2,3,4,5} is passed in, what will be the outcome?

- The code will return 5
- The code will return 0
- The code will return 15
- The code will not compile
- The code will cause a runtime error

Some Advices

- The exam is designed so that you can start at the beginning.
 - There is no need to read all the questions before you begin, although you may want to have a quick scan ahead.
 - You can navigate up/down and change your answers at any point before hitting submit.
- If you finish early. **Do the exam again.**

Part 4

Some Last Words

How was it for You?

- We might NOT have any end-of-semester survey
- But are there any comments you want to make NOW on:
 - Lectures
 - Online videos
 - Coursework
 - Labs
 - Space cadets
 - Ground controllers
- What are the best and worst things about the course?

Advice: On Programming

“A good programmer is someone who always looks both ways before crossing a one-way street.”

– Doug Linder

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“A good programmer is someone who always looks both ways before crossing a one-way street.”

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“If debugging is the process of removing software bugs, then programming must be the process of putting them in.”

– Edsger Dijkstra

Advice: On Mistake

“Always code as if the person who ends up maintaining your code will be a violent psychopath who knows where you live.”

– Rick Osborne

Advice: On Mistake

“Always code as if the person who ends up maintaining your code will be a violent psychopath who knows where you live.”

– *Rick Osborne*

“A computer lets you make more mistakes faster than any other invention in human history, with the possible exceptions of handguns and tequila.”

– *Mitch Ratcliffe*

Advice: On Java

“There are only two kinds of languages: the ones people complain about and the ones nobody uses”

— *Bjarne Stroustrup*

Advice: On Java

“There are only two kinds of languages: the ones people complain about and the ones nobody uses”

— *Bjarne Stroustrup*

“C++: an octopus made by nailing extra legs onto a dog.”

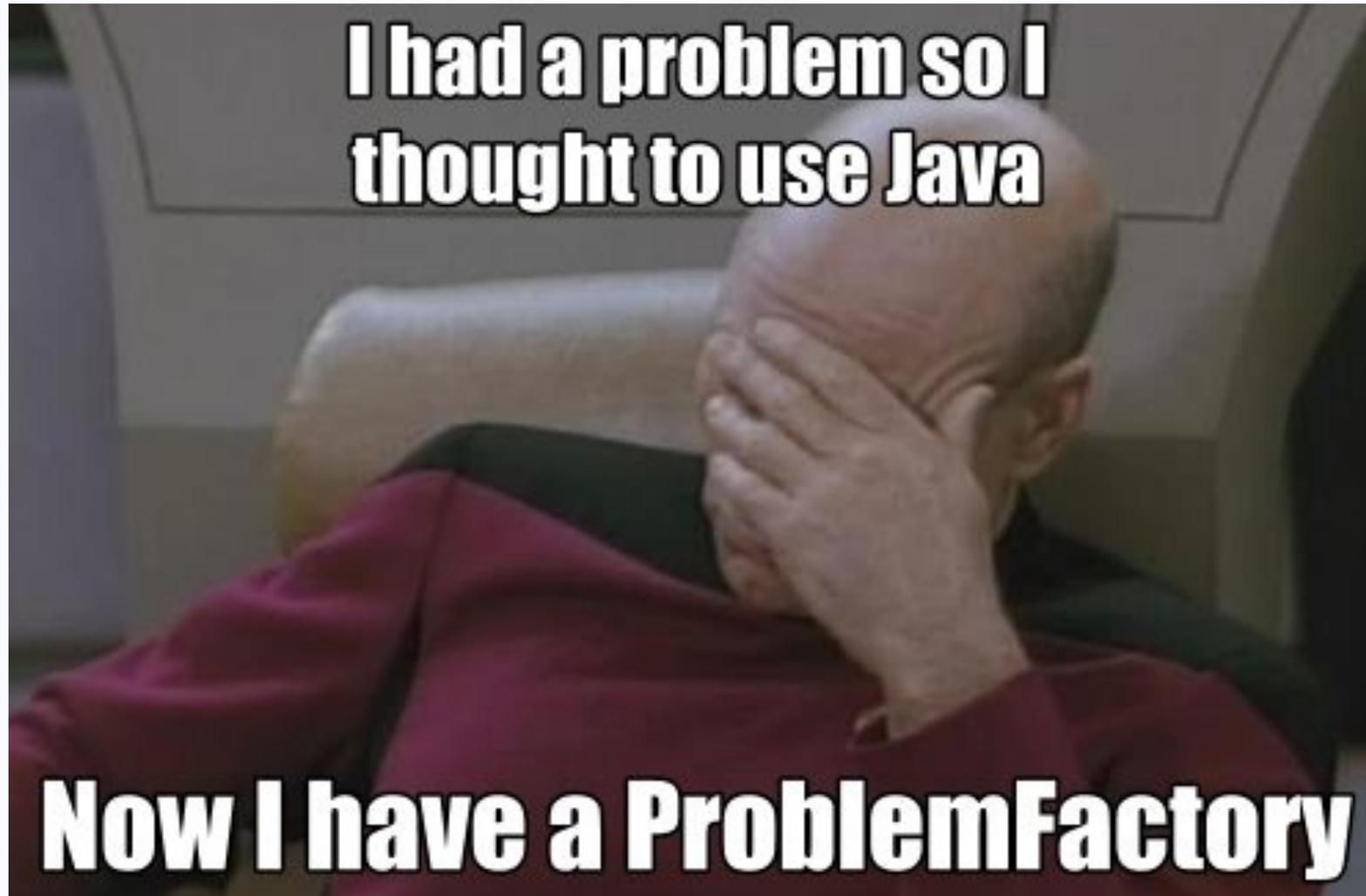
- *Steve Taylor*

“C++ is history repeated as tragedy. Java is history repeated as farce.”

– *Scott McKay*

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Advice: On Java



A Dirty Secret

- No matter how we teach you will mainly learn through **practice!**
- Programming is the single most important skill for a computing professional
 - Systematic thinking and problem solving
 - Abstraction and data modelling
- Did we mention that you need to **practice?**

SEAtS: 639851 PRACTICE!

“I've often thought that sucking less every year is how humble programmers improve. You should be unhappy with code you wrote a year ago.”

- Jeff Atwood, <http://www.codinghorror.com/>

“I have no talent. What I do have is a lot of practice. And I am not talking about occasionally dabbling in Ruby on the weekends. I am talking about the kind of practice where I beat code that isn't working into submission (though often times the code wins).”

- John Nunemaker, <http://railstips.org/>

YOUR QUESTIONS

Best of Luck

and

Have Fun!