Introduction to OOP

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Introduction to Object Oriented Programming

Preliminaries

Remark

Please note that this session will focus mostly on the administrative aspects of how the course will run before we jump into some actual programming in Java.

Preliminaries

Rules

My main (and only) rule for this module is *no griefing*. This is a term from online gaming which means to make it unpleasant or difficult for others to play the game.
In the same way please ensure that your actions do not prevent someone else from being able to learn.

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Section 1

Structure

Module Team

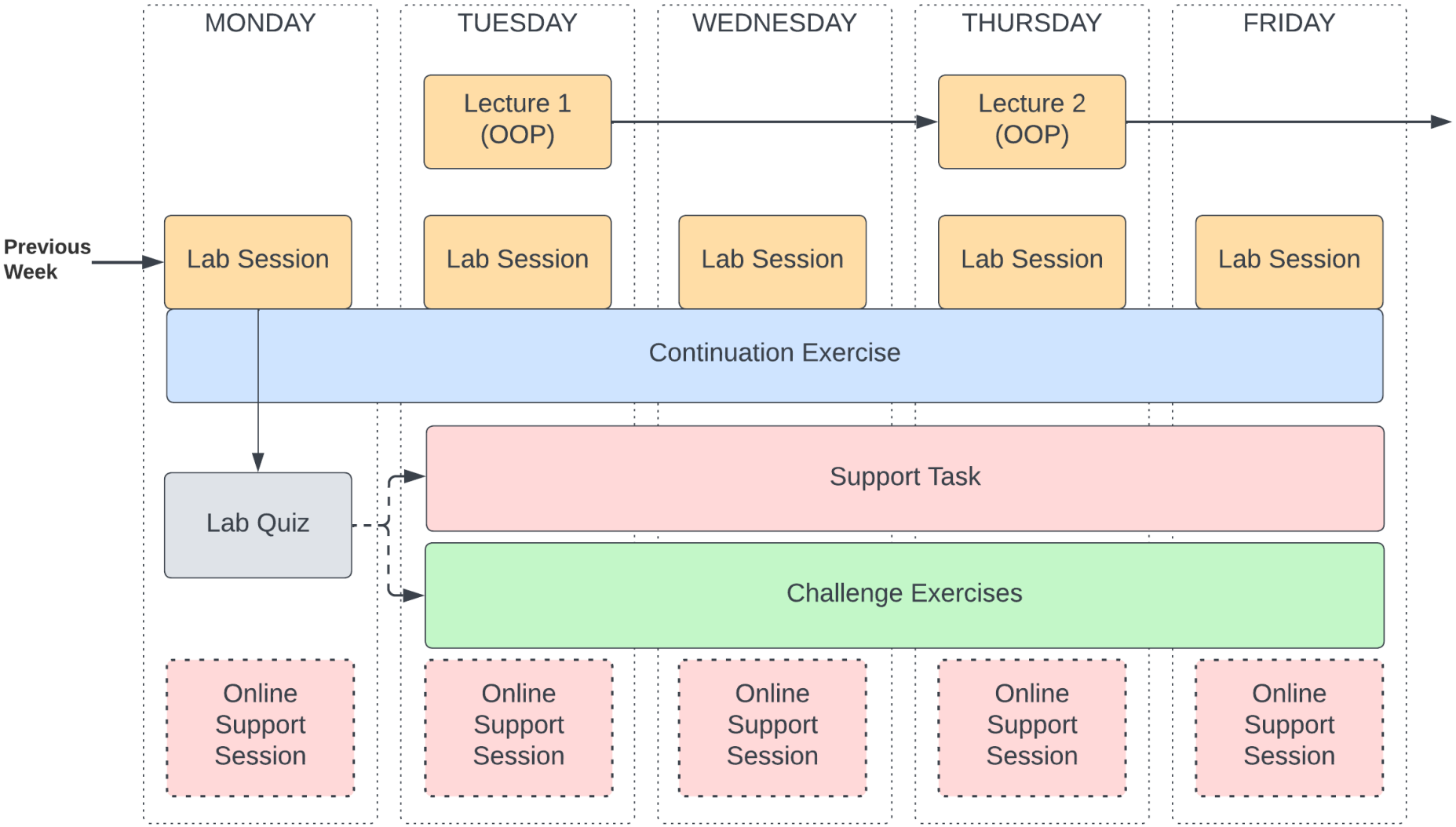
Name	Email	Role
Pieter	p.joubert@bham.ac.uk	Module Lead
Jizheng	j.wan.1@bham.ac.uk	Lecturer
Carl	c.wilding@bham.ac.uk	Lecturer
Ahmad	A.Ibrahim@bham.ac.uk	Lecturer (Dubai)

Module Structure

Week	Date	Topic
1	25/09	Creating Java Programs & Using Data
2	2/10	Methods, Classes & Objects
3	9/10	Decisions
4	16/10	Looping
5	23/10	Characters, Strings & Arrays
6	30/10	Support & Consolidation
7	6/11	Inheritance
8	13/11	Exception Handling & File I/O
9	20/11	Recursion & Collections
10	27/11	Algorithmic Complexity
11	4/12	Revision & Good Coding Practice

Please note that this planner only shows the main topics covered in each week. Additional content will also be included.

Weekly Structure



Section 2

Tools

Tools

Warning

The purpose of this module is not directly to teach you Java and the IntelliJ IDE. Instead we *use* Java and IntelliJ as tools to help you learn the OOP concepts required to pass the module and meet the outcomes.

Programming Language: Java

- We will be using the Java programming language during this course.
- Java is an industry standard language, as well as an excellent teaching language.
- We will be using version 17 of the OpenJDK. We will spend some time in the lab sessions showing you which version to use and how to set up and install it.

Using a Texteditor to write Java

- We will start the course by using a basic texteditor to write Java code.
- We are doing this to make sure we focus on te actual code and not the tooling.
- For this you can use any texteditor of your choice.
- We will soon move over to a fully-fledged IDE (Integrated Development Enivronment)

Integrated Development Environment: IntelliJ

- We will be using the *JetBrains IntelliJ Integrated Development Environment*.
- This is a single software program that handles all the tasks related to writing, compiling, debugging and testing code. (And more, but we will focus on these taks.)
- *IntelliJ* is available in the labs, but you also have access to the fully featured student version using your student details.
- Please note that there is limited availability of computers in the labs.
- If you have your own device please make sure you install *IntelliJ* as soon as possible.

Software Project Management Tool: Maven

- To help manage our software development process we will be using a tool called *Maven*.
- It is included with IntelliJ so there is no need to install any additional software packages or programs.
- We will not spend a lot of time discussing *Maven* as you will not need to know how it works in detail, but we will discuss soem of the basics during the lab sessions.

Learning Management System: Canvas

- The primary contact point with information regarding the module, outside of the face-to-face classes, is the Canvas site.
- Please make sure you have access to the Canvas site, and that you check it regularily for updates.
- All assessments will be submitted through Canvas, so please make sure you are comfortable with how the submission system works.

Section 3

Assessment

Assessment Overview

Assessment	**Type**	**Release Date**	**Weight**
Assignment 1	Programming	Week 7	30%
Assignment 2	Programming	Week 10	30%
Assignment 3	Test	January Assessment Week	40%

Assignment 1

- Assignment 1 will be a programming submission. This means that you will need to submit one or more Java programs on Canvas.
- You will be given more detail on the submission process on Canvas, and in some of the upcoming classes.
- Assignment 1 will include the first 6 weeks of work covered in the course.
- Like the other Assignments it will be *auto-marked*. This means it is critical to follow all submissions requirements to the letter.

Assignment 2

- Assignment 2 will be a programming submission. This means that you will need to submit one or more Java programs on Canvas.
- You will be given more detail on the submission process on Canvas, and in some of the upcoming classes.
- Assignment 2 will include the first 10 weeks of work covered in the course.
- Like the other Assignments it will be *auto-marked*. This means it is critical to follow all submissions requirements to the letter.

Assignment 3

- Assignment 3 will be a proctored test.
- The test will be run on Canvas and will include a range of question types, including but not limited to, Multiple Choice, Multiple Answer, Fill in the Blank, etc.
- Assignment 3 will include both theory and practical questions.

Section 4

Lecture summary

Lecture summary

- Structure
- Tools
- Assessment

Questions

Thank you! Questions?