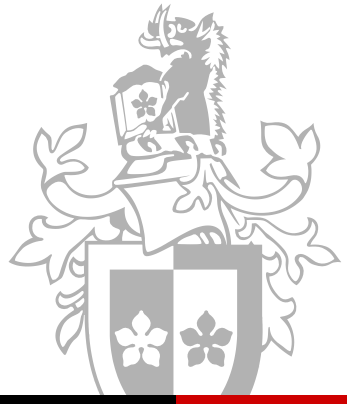
COS30041 Create Secure and Scalable Software

Semester 1, 2022



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Aims

- To introduce techniques and technologies used in constructing enterprise software solutions
- Language used: Java
- Framework used: Java EE

COS30041 Learning Outcomes

- Build and deploy secure and scalable application using contemporary frameworks (Java EE)
- Explain and apply strategies, patterns and frameworks to address a range of scalability issues
- Explain and apply strategies, patterns and framework to address a range of security issues
- Use contemporary tools to evaluate the scalability and security of applications

Portfolio Assessment (100%)

Learning Summary Report

- A reflection of your learning
- Discussion of how you address the intended learning outcomes to the satisfaction of the assessment panel

Pieces of Work

- [Pass] Base Work
- [C or above] Extension Work
- [D or above] A program of your own choice, its design and justifications
- [HD] A research report

See Unit Outline for detailed assessment guideline

Portfolio Tasks [P]

- Various weekly portfolio tasks
- Each focusing on the major concepts in Enterprise Development

Work vs Grade

→Grade	Work	Items
P	Base	Learning Summary Report Glossary Programming Exercises
C	P + software extension	Feature extension of your own choice with design justifications
D	C + a program	A program of your own choice
HD	D + a research report	A research report comparing two different ways of programming a certain piece of software

Pre-requisites

COS20007 Object-Oriented Programming or SWE20004 Technical Software Development

AND

COS10005 Web Development or COD10011 Creating Web Applications or COS20001 User-Centred Design

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You should have knowledge and skills in **Object-Oriented Programming**

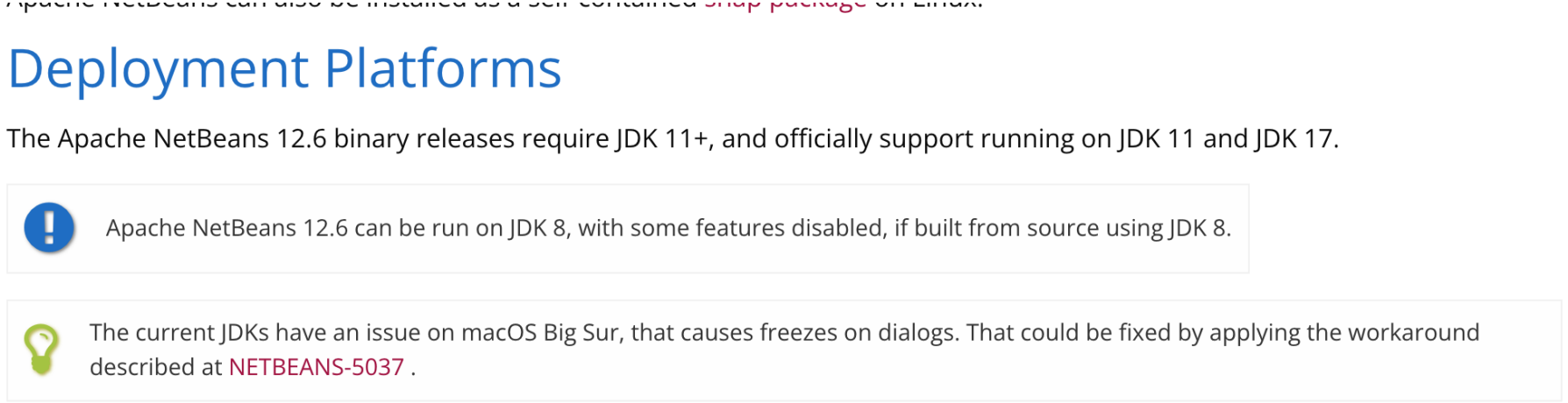
If you only studied SWE20004 Technical Software Development, you should consider carefully if you should select this unit.

Development Tool (Windows Lab)

- Apache NetBeans 12.2 (or 12.5) [according to Swinburne ITS]
  - With GlassFish Server Open Source Edition 5.1.0
- Eclipse – GlassFish Server plugins discontinued long time ago
- IntelliJ – Your own risk

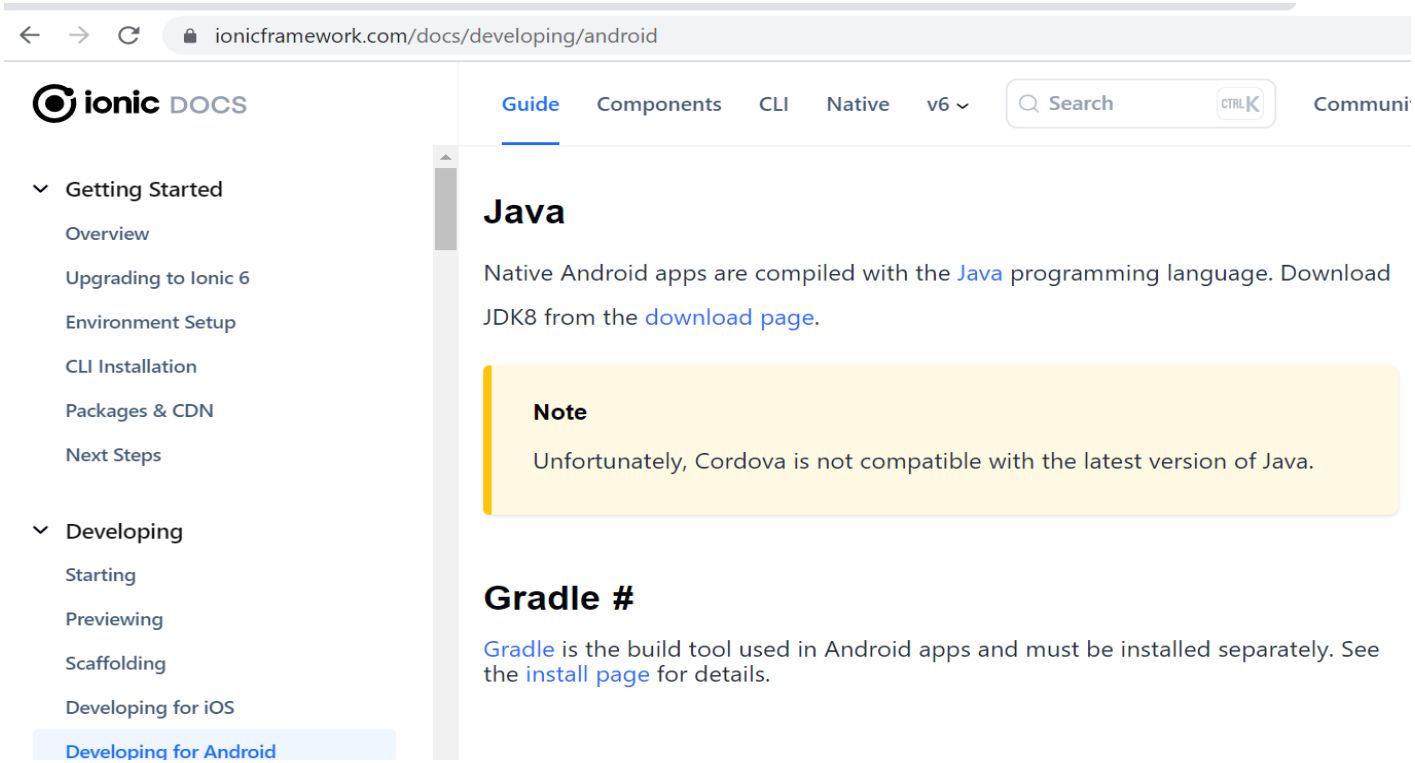
Note:

- Use Apache NetBeans 12.2 (or 12.5)
- Should not use the version 12.6:



Note:

- Most of frameworks use JDK 8, e.g. ionic framework:



See: Lab_01a_Setup_NB12_2_GF5