

	SCHOOL OF POLITEKNIK BRUNEI WEEKLY MODULE PLAN	REFERENCE NUMBER: PB/AS/LP/002 VERSION: 1.2 REVISION DATE: 06/10/2018 EFFECTIVE DATE: 1/1/2019	
MODULE CODE/NAME	NS4307, Network Programming	TOPIC	Introduction to Network Programming Java Binary Input & Output
SEMESTER	Semester 2, 2021 / 2022	GROUP CODE/INTAKE	DITN12 (Intake 11), DITN10R (Intake 9)
SCHOOL/DEPT	School of ICT	WEEK	Week 3 - 06/02 - 12/02
PEDAGOGICAL APPROACH			
<input type="checkbox"/> Knowledge Building <input type="checkbox"/> Discussion <input checked="" type="checkbox"/> Presentation <input checked="" type="checkbox"/> Blended Learning <input type="checkbox"/> Co-operative/ Collaborative Learning <input type="checkbox"/> Debate <input type="checkbox"/> Experimental Learning <input checked="" type="checkbox"/> Case Studies <input type="checkbox"/> Others, please specify _____			
RESOURCES			
Learning management system			
LESSON LEARNING OBJECTIVES	METHOD OF INSTRUCTION/LEARNING ACTIVITIES		REFLECTIVE EVALUATION
At the end of this lesson, the student should be able to: 1) Review on TCP IP Network Layer 2) Understand and able to apply Java Binary Input & Output	Session 1: Lecture (Introduction to Network Programming): 1 hour - Review on what is networks - Review on each component in Layers of Network (TCP IP) - Review on Internet Protocol (IP) - Review on Transmission Control Protocol (TCP) - Review on User Datagram Protocol (UDP) - Review on IP Addresses - Review on Domain Name System - Review on Ports - Review on the Internet - Review on Internet Address Blocks - Review on Network Address Translation - Review on Firewalls - Review on Proxy Servers Lecture (Java Binary Input & Output): 30 minutes - Review on Java Input Output - Introduction on Java Input Output in Network Programming context - Explain the difference between Java Text and Binary Input Output - Explain the Inheritance tree of Java Binary Input Output library - Explain the methods available in InputStream and OutputStream - Explain in details on how to use FileInputStream and FileOutputStream - Explain the closing the stream using traditional try and catch statement and using try with resources Exercise (Quiz): 15 minutes - Facilitate students answering quiz in PBLMS for Git Remote. Practical (Java Binary Input & Output): 1 hour 15 minutes - Facilitate students recapping implementing Java Text IO - Facilitate students implementing basic Java Binary IO - Show students difference between the two. - Facilitate students how to use FileInputStream and FileOutputStream.		No issue in terms of recapping the basic concept of networks. But will emphasis again some of the important concepts related to the practical next week. During lecture and practical, did some questioning if they remember the concepts taught in previous Java modules. Only a few can answer accordingly. It is as expected since if the concepts are not touched in a period of time it takes time to recall back the concept. In this case, I asked about how to create object, what is class, what is instance variables, try and catch, and what to implement if the are repetitive tasks. Spent a brief recap explaining on these concepts as well.
At the end of this lesson, the student should be able to: 1) Understand and able to apply Java Binary Input & Output	Session 2: Lecture: 30 minutes - Explain in details on how to use DataInputStream and DataOutputStream - Explain in details on how to use BufferedInputStream and BufferedOutputStream - Explain in details on how to use ObjectOutputStream and ObjectInputStream - Emphasis on object cannot be stored if the object class does not implements Serializable Interface - Explain in details the purpose of Serializable Interface Practical: 1 hour 30 minutes - Facilitate on how to use DataInputStream and DataOutputStream - Facilitate on how to use BufferedInputStream and BufferedOutputStream - Facilitate on how to use ObjectOutputStream and ObjectInputStream - Show that object cannot be stored if the object class does not implements Serializable Interface Practical (Exercise): 1 hour - Facilitate to implement a Java application to make a copy of a file		Spent an extra 15 minutes during the lecture to explain how objects are stored in the computer memory to emphasis why Java will not duplicate objects when storing into the file using ObjectOutputStream. At the beginning of the practical exercise, had to guide the students again how to connect their Java project to Github. I assume this is due to it has been a week since this was taught. If the students does not practice them, of course they will forget the steps. This took 10 minutes and when doing the exercises, some students are unable to complete the exercise by the end of class. Asked them to complete them at home and upload their project to Github.
At the end of this lesson, the student should be able to:	Session 3:		
NAME & SIGNATURE			
MODULE LECTURER	PROGRAMME LEADER / ASSISTANT HOS (aHOS)/ HEAD OF SCHOOL (HOS)*		
DATE: 08/02/2023	DATE: 08/02/2023		
COMMENTS BY PROGRAMME LEADER/ ASSISTANT HOS (aHOS)/ HEAD OF SCHOOL (HOS) (If any)			
Please focus more on the weak students and keep follow up on their work. This is to make sure they can applied and understand the concept well. All good cg.			