



AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)
 Faculty of Science and Technology (FST)
 Department of Computer Science (CS)
 Object Oriented Programming 1
 FinalTerm Assignment
 Fall 2020-21

Total Marks: 20 **Course Teacher:** MD.NAZMUL HOSSAIN **Time:** 12 days

General Instructions:

1. Answer all the Questions (Handwritten).
2. Use pencil/pen to write the answers and to draw diagrams.
3. Write your name & id at the top of each page to make your content unique.
4. Take photo/scan all the answers and prepare a single .pdf file.
5. The name of the .pdf file should be your university id number.
6. Get prepare yourself for the viva as you are going to evaluate strictly.
7. Submission Guidelines:

Submission Title : FinalTerm Assignment
Deadline : 24 December 2020
Submission place : Microsoft Teams

Special Note:

If a student is caught for unfair means during the viva then he/she will get 0 out of 20.

1. Briefly Explain the following keywords:

- | | |
|--------------|---------------|
| a. abstract | h. catch |
| b. final | i. extends |
| c. interface | j. implements |
| d. package | k. import |
| e. super | l. null |
| f. throw | m. GUI |
| g. try | n. finally |

2. Answer the following Questions:

- a. Explain Real life example of OOP basic concepts.
- b. What is Encapsulation in Java? Why is it called Data hiding?
- c. How to achieve encapsulation in Java? Give an example.
- d. What is abstraction in java?
- e. Can abstract class contains main method in Java ?
- f. How to achieve abstraction in java?
- g. What will happen if we do not override all the abstract methods in sub-class?
- h. How Inheritance is implemented in java?
- i. What is the order of extends and implements keyword on Java class declaration?
- j. What are different types of Inheritance supported by Java?

- k. Where you can use final keyword in java?
- l. What is blank final variable?
- m. Can a method be abstract and final?
- n. What is a Java package?
- o. What is Constructor Chaining ?
- p. Can we have this and super in the same constructor?
- q. Can an abstract class in Java have a constructor?

3. Write the difference between (Table Format):

- a. Abstraction and Encapsulation
- b. abstract class and interface
- c. Polymorphism and Inheritance
- d. run time polymorphism and compile time polymorphism
- e. composition and inheritance
- f. Inheritance and Encapsulation
- g. Association, Composition, and Aggregation
- h. abstract method and final method
- i. error and exception
- j. checked and unchecked exceptions
- k. throw and throws
- l. Is-A and Has-A

4. Explain the following figures:

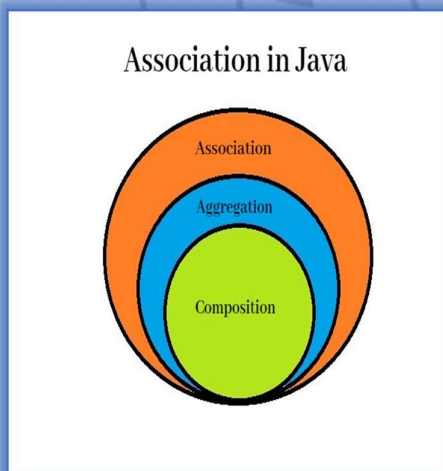


Figure: 1

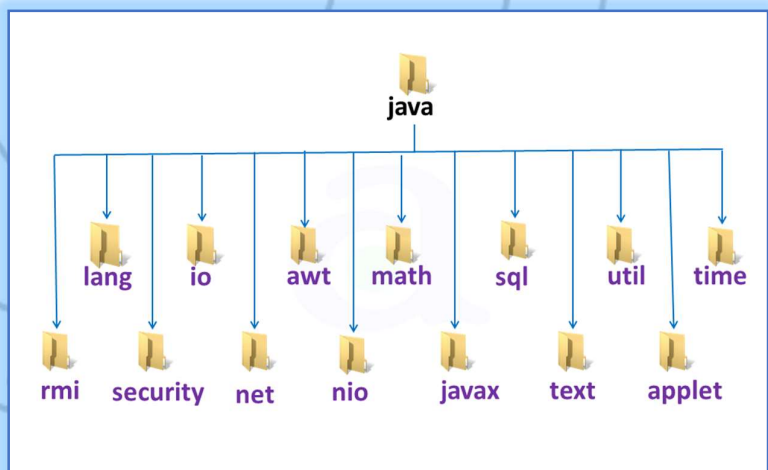


Figure: 2

Good Luck!