كلية تكنولوجيا الصناعة والطاقة
Faculty of Industrial and Energy Technolog

جامعة برج العرب التكنولوجية
BORG AL ARAB TECHNOLOGICAL UNIVERSITY

Course: JAVA (2) **Semester**: 1st term 2025/2026.	**Lecturer**: Dr. Mohammed AbdelFattah **Assistants**: Engs. / Mostafa El-Mansi, Osama El-Samdouni, Rahgab Hassan, Rana Zakaria, Heba Allah, Maryam Fathy

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***Tutorial:* Sheet 3**

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Part A – True or False:

1. `Object` class is the parent class of all classes in Java. (____)

2. Wrapper classes are used to convert primitive data types into objects. (____)

3. The `equals()` method in the `Object` class compares object references by default. (____)

4. Every class in Java directly or indirectly inherits from the `Object` class. (____)

5. `ArrayList` can store primitive data types directly without using wrapper classes. (____)

6. The `List` interface allows duplicate elements in Java. (____)

7. The size of an `ArrayList` is fixed after initialization. (____)

8. The `toString()` method is inherited from the `Object` class. (____)

9. `LocalDateTime` belongs to the `java.util` package. (____)

10. You cannot use a `for-each` loop to iterate through an `ArrayList`. (____)

Part B – Multiple Choice Questions

1. Which of the following is the superclass of all Java classes?

   a) `String`   b) `Object`   c) `Class`   d) `Main`

2. Which method of the `Object` class is used for comparing two objects?

   a) `compareTo()`   b) `equals()`   c) `compare()`   d) `same()`

3. What is the wrapper class for the primitive type `int`?

    a) `Integer`   **b)** `Int`   **c)** `Number`   **d)** `Float`

4. Which process automatically converts a primitive type into its wrapper object?

    a) Casting   b) Autoboxing   c) Unboxing   d) Wrapping

5. The `ArrayList` class implements which interface?

    a) `Set`   **b)** `Queue`   **c)** `List`   **d)** `Collection`

6. Which package contains Java's modern date and time classes?

    a) `java.date`   **b)** `java.util`   **c)** `java.time`   **d)** `java.datetime`

7. Which method returns the number of elements in an `ArrayList`?

    a) `size()`   **b)** `length()`   **c)** `count()`   **d)** `getSize()`

8. Enums in Java are:

    a) Classes that can have only constants   b) Variables   c) Packages   d) Interfaces

9. Which of the following correctly declares an enum?

    a) `enum Days {MON, TUE, WED}`   **b)** `enum = Days {MON, TUE, WED}`

    c) `Days enum {MON, TUE, WED}`   **d)** `enum Days = {MON, TUE, WED}`

10. The `List` interface allows:

    a) Only unique elements   b) Ordered elements with duplicates

    c) Unordered elements   d) Only primitive data types

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Part C: Programming Tasks

1. **Program 3 – Date and Time:**

   Write a program using `LocalDate`, `LocalTime`, and `LocalDateTime` to print the current date, time, and both together in a formatted way.

2. **Program 4 – Enum Example:**

   Define an `enum` called `Day` with days of the week and use a `switch` statement to display a message for each day.

3. **Program 5 – ArrayList and List Interface:**

   Create a `List<String>` of student names using `ArrayList`, add several names, remove one, and display all names using a `for-each` loop.