



كلية تكنولوجيا الصناعة والطاقة



Information Technology Department  
2<sup>rd</sup> Year



جامعة برج العرب التكنولوجية  
BORG AL ARAB TECHNOLOGICAL UNIVERSITY

جامعه برج العرب التكنولوجيه

Course: Semester:2 <sup>rd</sup> term 2025/2026	Lecturers: <b>Dr. Radwa Rady</b> <b>Dr. Ghada Fathy</b>
<b>Java Programming</b> <b>Tutorial 5</b> <b>Sheet (5)</b>	

**A) Write a Java program that:**

1. Creates a method called `rectangleArea`.
  2. The method takes **two parameters**: length and width.
  3. The method returns the **area of the rectangle**.
  4. In `main()`, call the method and print the result.
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**B) Write a Java program that:**

1. Creates an **array of 6 integers**.
  2. Reads the values from the user.
  3. Create a method called `calculateAverage`.
  4. The method receives the **array as a parameter**.
  5. The method returns the **average of the numbers**.
  6. Print the result in `main()`.
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**C) Write a Java program that:**

7. Creates a recursive method called `power`.
8. The method receives two integers: *base* and *exponent*.
9. The method calculates the value of:

$base^{exponent}$

4. Use recursion to compute the result.
5. In main(), call the method and print the result.

```
power(2,4)
2 * power(2,3)
2 * 2 * power(2,2)
2 * 2 * 2 * power(2,1)
2 * 2 * 2 * 2 * power(2,0)
2 * 2 * 2 * 2 * 1
= 16
```