COMP2026 Problem Solving Using Object Oriented Programming

# Laboratory 6

**Part A Discovery Exercises**

**Task 1: Methods**

1. Given:

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| boolean eq3(int a, int b, int c) {  if(a == b) && (a == c)){  return true;  }  return false;  } |

What does the above method do?

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| Certification a is equal to b and b is equal to c. If both true return true, else return false. |

1. Given:

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| ...  void runApp(){  int x = 5;  System.out.println(func(x));  System.out.println(func(x+3));  System.out.println(func(func(x+3)));  }  int func(int a) {  return a + 3;  }  ... |

What values are printed out by the above code fragment?

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| 8  11  14 |

1. Given:

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| ...  void runApp(){  int a = 1;  int b = 2;  System.out.println("Before update...");  System.out.println("a = " + a);  System.out.println("b = " + b);  update(a, b);  System.out.println("After update...");  System.out.println("a = " + a);  System.out.println("b = " + b);  }  void update(int a, int b)  {  a++;  b++;  System.out.println("In update...");  System.out.println("a = " + a);  System.out.println("b = " + b);  } |

Write the output in the box below.

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| Before update...  a = 1  b = 2  In update...  a = 2  b = 3  After update...  a = 1  b = 2 |

1. Given:

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| ...  void runApp(){  int[] a = {1, 2};  System.out.println("Before update...");  printArray(a);  update(a);  System.out.println("After update...");  printArray(a);  }  void update(int[] a)  {  for(int i = 0; i < a.length; i++)  {  a[i]++;  }  System.out.println("In update...");  printArray(a);  }  void printArray(int[] a)  {  for(int i = 0; i < a.length; i++)  {  System.out.println("a[" + i + "] = " + a[i]);  }  } |

Write the output in the box below.

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| Before update...  a[0] = 1  a[1] = 2  In update...  a[0] = 2  a[1] = 3  After update...  a[0] = 2  a[1] = 3 |

**Task 2: Method Overloading**

Given:

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| String fun(){  return "Java";  }  String fun(String a, int b){  return a + " " + b;  }  String fun(String s){  String r = "";  for(int i = 0; i < 5; i++){  r = r + s;  }  return r;  }  String fun(int x){  if(x > 80){  return "High!";  }  return "Low!";  }  String fun(char c){  String s = "";  for(int i = 0; i < 3; i++){  s = s + "-" + c;  }  return s;  }  ... |

What will be printed out by the following code fragment?

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| System.out.println(fun());  System.out.println(fun('T'));  System.out.println(fun("Java", 2026));  System.out.println(fun("Assignment"));  System.out.println(fun("A"));  System.out.println(fun(100)); |

Answer:

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| Java  -T-T-T  Java 2026  AssignmentAssignmentAssignmentAssignmentAssignment AAAAA High! |

**References**

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