**Name:** Abenes, Enrico O. **Subject & Section:** CC4, INTL A

**CC4-INTL Data Structures and Algorithms**

LECTURE ACTIVITY 1: ARRAY ADDRESS CALCULATIONS

**Instructions:** From our previous lecture, please calculate the addresses for the given arrays using the **Row Major System** for the star symbol (\*) and the **Column Major System** for the circle symbol (●).

1. **B = 158** i\* = 1 j\* = 1 c = 6

**w = 27** i● = 2 j● = 4 r = 3

A grid with stars and dots

Description automatically generated

|  |  |
| --- | --- |
| **Row Major System(\*):** | **Column Major System(●):** |

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **B = 379** i\* = 2 j\* = 0 c = 4

**w = 57** i● = 1 j● = 3 r = 4

A grid with a blue and green dot

Description automatically generated

|  |  |
| --- | --- |
| **Row Major System(\*):** | **Column Major System(●):** |

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **B = 234** i\* = 1 j\* = 4 c = 5

**w = 17** i● = 2 j● = 1 r = 4

A grid with a blue and green dot

Description automatically generated

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| --- | --- |
| **Row Major System(\*):** | **Column Major System(●):** |

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **B = 550** i\* = 1 j\* = 3 c =6

**w = 29** i● = 3 j● = 2 r = 4

A grid with a star and a dot

Description automatically generated

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| **Row Major System(\*):** | **Column Major System(●):** |

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **B = 1357** i\* = 2 j\* = 3 c =6

**w = 16** i● = 1 j● = 1 r = 3

A grid with blue and green dots and stars

Description automatically generated

|  |  |
| --- | --- |
| **Row Major System(\*):** | **Column Major System(●):** |