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| **Skill 23.1 Exercise 1** | |
| Refer to the image below to answer the following,   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **gradebook** | | | | | | |  | **Assignment 1** | **Assignment 2** | **Assignment 3** | **Assignment 4** | **Assignment 5** | | **Bart** | 4.5 | 1 | 5 | 2 | 4 | | **Kyle** | R | 5 | 4 | 2 | 2.5 | | **Bugs** | 1 | 2 | 3 | 4 | 3 | | **Marvin** | 4 | M | 3 | 3.5 | 4 | | |
| What is the row and column associated with Kyle’s score on Assignment 3? |  |
| What is the value associated with the following location: row = 3, col = 2 |  |
| What is the length of row = 2? |  |
| What is the length of column 5? |  |

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| **Skill 23.2 Exercise 1** |
| Consider the following a matrix   |  |  |  |  | | --- | --- | --- | --- | | 5 | -16 | 9 | 21 | | 22 | 19 | -101 | 36 | | 18 | 17 | 64 | -2 | |
| (a) Write a single line of code that could be used to declare and initialize the size of the array above, but do not populate it with values. |
| (b) Write a single line of code that will create the above integer array and populate it with values. |
| (c) Write a line of code that will printout the array element occupied by -101 |
| (d) Write a single line of code that will change value occupied by -2 to 2 |
| (e) What is the value associated with a[2][1]? |

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| **Skill 23.3 Exercise 1** |
| Refer to the gradebook array below which creates a 2D array of grades.  String gradebook[][]={{"5","4.5","3","4"}, {"2","3","2.5","4","R","3.5"}, {"4","1","3.5","5","4","1","5"}, {"5","2","3.5","3","4.5"}}; |
| (a) What is the length of each row? |
| (b) Write code to print the length of the first row and the last row, |

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| **Skill 23.4 Exercise 1** |
| Refer to the gradebook array below which creates a 2D array of grades.  String gradebook[][]={{"5","4.5","3","4"}, {"2","3","2.5","4","R","3.5"}, {"4","1","3.5","5","4","1","5"}, {"5","2","3.5","3","4.5"}}; |
| (a) Write code to print out all the values in the array in a table format |
| (b) A new student has joined the class. Declare a new array that can accommodate one more student with 5 assignments. Write code to copy the all the values from the gradebook array to this array. |