**Lab: 6**

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| **Problem statement(s)**  **EX1:** Create a method that takes a map and prints it in the format “Name:” *new line* “Mark:”. Add this method to the main method.  **EX2:** Create a method that calculates the average mark of students in a map.  **EX3:** Throw an ‘InvalidNumberException’ if the user enters a negative mark. |

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| **Program description(s)**  **EX1:** ‘printMap’ creates a map entry for the current iteration and outputs the key followed by the value. I have also commented out another way of doing this using a foreach loop instead of a while loop.  **EX2:** ‘mapAvg’uses a foreach loop to iterate through the map and calculate the total sum, which is then divided by the size of the map.  **EX3:** An ‘InvalidNumberException’ is created an then thrown by the ‘checkNegException’ method if the mark is below 0. The ‘checkNegException’ is used in the ‘mapAvg’ and ‘highestMark’ method. |

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| **Test description**  Entered negative and positive marks, an exception is thrown when a negative number is entered and the message “Negative marks are prohibited.” Is printed in the console. |
| **Known bugs**  - |
| **Possible improvements**  Prompt the user to enter the mark again if it is negative. |
| **Comments**  I learnt how to use map entries and iterate through maps. |
| **Extra credit**  Added a prompt for the user to enter the mark again if it’s negative. Although this now makes the ‘InvalidNumberException’ redundant, however, it is not necessary to use an exception in this case. |
| **References**  **-** |