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| **Features** | **Description** |
| Class Student | * Represents name, gender, course, mobile with get() and set() * Contains methods to help in displaying the student records and all set methods will trim the inputs assigned to them |
| Class Assignment | * Contains main() that calls methods from student class and assignment class |
| Validate for non-numeric input. | * The program only accepts valid input that is specified in validate methods * Validate methods have a loop in them so invalid inputs cannot be accepted |
| Check for the duplicated student name when adding in a new student to the system. | * If a name is duplicated, then system will not allow that student to be added |
| Partial search for search, delete, edit. | * Allows a partial name to be entered. If there are duplicates found then it will notify user |
| Check if user clicked cancel or exit when program is asking for input | * Returns the user to the main menu, only exits the program when 6 is entered |
| Display student records in a tabular format. | * Use fixed width font to equally space out the records * Truncates name that are longer than 20 characters |
| Include student’s image in the system. | * If the student’s name is found, then the image will be shown when searching for them * Uses JOptionPane to help display the student image |
| Edit a student’s info in the system. | * Edit student information * Displays default values in the text box |
| Implement sound effects. | * When exiting the program, a ‘ding’ sound will be played |
| Store student records in a file and retrieve them from the file. | * Read and write to a file called “AllArrays.txt” * Uses a Boolean, bChangesMade, to write to file when bChangesMade is true |
| Any other features that enhance the system. | * Extra display using JTable. * Table can be sorted by clicking on the respective headers |

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| **Date** | **Activity** |
| **25 May 2018** | **Started project with 1 class and 4 arrays containing name, gender, course, mobile** |
| **25 May 2018** | **Completed Main Menu and Display** |
| **26 May 2018** | **Completed Search/Add/Delete/Exit** |
| **27 May 2018** | **Completed Edit** |
| **2 June 2018** | **Completed read file at the start of the program and write file when exiting program** |
| **9 June 2018** | **Completed adding ‘ding’ sound when exiting** |
| **9 June 2018** | **Tried adding Student class and failed** |
| **16 June 2018** | **Completed hardcoding validation for all input** |
| **17 June 2018** | **Completed image and JTable display** |
| **23 June 2018** | **Completed changing read and write to methods and JTable sorting** |
| **25 June 2018** | **Started changing validation for input to methods** |
| **14 July 2018** | **Tried adding partial search and completed Student class** |
| **21 July 2018** | **Completed partial search** |
| **26 July 2018** | **Started redundancy check for cancel buttons** |
| **31 July 2018** | **Completed redundancy check for cancel buttons** |