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CSC 120-S – Java Programming 1

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Dental Records Design:

1. Receiving Input

1.1 Retrieve how many people are in the family

 1.1.1 Validate that is less than or equal to 6

1.2 Retrieve family members' names

 1.2.1 Store the names in an array

1.3 Retrieve the tooth types for upper teeth

 1.3.1 Validate that it is I, B, or M

 1.3.2 Validate that the characters are less than or equal to 8 characters

1.4 Retrieve the tooth types for lowers

 1.4.1 Validate it is I, B, or M

 1.4.2 Validate it is less than or equal to 8 characters

1.5 Store tooth types of the family in a 3D array

 1.5.1 Plane corresponds to each

 1.5.2 Two rows that correspond to upper and lower teeth

 1.5.3 Each column corresponding to a tooth

 1.5.4 Store tooth types of the family in a 3D array

2 Display Menu

2.1 Prompt the user to pick a menu option

2.1.1 Repeat until the exit option is chosen

 2.1.1.1 Validate P, E, R, or X was chosen

 2.1.1.2 Upper and/ or lower case accepted

2.2 Print the record

 2.2.1 Print the uppers and lower teeth types of each family member

2.3 Extract a tooth

 2.3.1 Retrieve a specific family member

 2.3.2 Validate it's the right person

 2.3.3 Retrieve upper or lower

 2.3.4 Validate that a U or L was entered

 2.3.4.1 Upper and/or lower case accepted

 2.3.5 Retrieve tooth number

 2.3.6 Validate that it corresponds

 2.3.7 Validate that there are no missing teeth

 2.3.8 Convert the corresponding tooth to type M in the array

2.4 Report on any root canals

 2.4.1 Add the total number of I teeth in the family

 2.4.2 Add the total number of B teeth in the family

 2.4.3 Add the total number of M teeth in the family

 2.4.4 Find the roots of $IX^2 + BX - M$ using the totals

2.5 Exit

3 Exit program

 3.1 Print exit message

3.2 Stop the menu from printing

3.3 End the program