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CSC 120 – Java Programming 1

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Dental Records Design:

1. Input

1.1 Retrieve how many people in the family

1.1.1 Validate that it is less than or equal to 6

1.2 Retrieve the names of family members

1.2.1 Store name in an array

1.3 Retrieve the tooth types for upper teeth

1.3.1 Validate it is I, B, or M

1.3.2 Validate that it is less than or equal to 8 characters

1.3.2.1 Upper and/ or lower case accepted

1.4 Retrieve tooth types for the lowers

1.4.1 Validate it's I, B, or M

1.4.2 Validate it's less than or equal to 8 characters

1.4.2.1 Upper and/ or lower case accepted

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 corresponds 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 Menu

2.1 Prompt user to pick a menu option

2.1.1 Repeat until exit is chosen

2.1.2 Validate P, E, R or X was chosen

2.1.2.1 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 family member

2.3.2 Validate it's the right person

2.3.2.1 Upper and/or lower case accepted

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 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 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

3.1 Print exit message

3.2 Stop the menu from printing

3.3 End the program