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CSC 120-S – Java Programming 1

October 27, 2024

### 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