PSEUDOCODE

1. Display menu:
2. Display Statistics
3. Export data of children who haven’t lost any tooth
4. Display number of claims per state
5. Compare two states
6. Exit
7. Enter choice
8. If choice <- a) then display statistics
9. Total number of children in the list.
10. Import csv module
11. Open addresses.csv with open() and put data in a list using reader() function of csv
12. Initialize count =0
13. Iterate through the list and increment count
14. Display count
15. Average number of teeth claims over the years
16. Import csv module
17. Make a dictionary of addresses.csv using DictReader() function
18. Initialize sum = 0
19. Calculate the total sum by adding row[‘Total number of teeth lost’]
20. Display average = sum/count
21. Number of children who haven’t lost a tooth
22. Initialize count =0
23. Increment the count if row[‘Total number of teeth lost’]==0
24. Display count
25. Number of children who lost all their baby teeth
26. Initialize count=0
27. Increment the count if row[‘Total number of teeth lost’]==20
28. Display count
29. Total expenditure for this year
30. Initialize expenditure=0
31. If row[‘Total number of teeth lost’]==1 then expenditure = expenditure + 1
32. If row[‘Total number of teeth lost’]>1 then expenditure = expenditure + 0.5
33. Display total expenditure in dollars
34. If choice <- b)
35. Enter a new file name from user
36. Calculate number of children who have not lost any tooth
37. Save the data in file entered by user using file.write() method
38. Display the data and the file name
39. If choice <- c)
40. Import matplotlib.pyplot module //install it using pip install matplotlib
41. Make a list of states
42. Count number of claims per state using row[‘State’]
43. Put all claims in a list called claims in sync with states
44. Make a plot using states as x-axis and number of claims as y-axis
45. Set Title, xlabel(), ylabel() and set grid=True
46. If choice <- d)
47. Enter first state
48. Enter second state
49. Calculate number of claims for both states by row[‘Total number of teeth lost’]
50. Calculate frequency of both states
51. Show the plot using states as x-axis and number of claims/Frequency as y-axis
52. Set Title, xlabel() , ylabel() and set grid=True
53. If choice <- e)
54. Display thank you message

TEST CASES

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| --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Test Scenario | Test Steps | Test Data | Expected Results | Actual Results | Pass/Fail |
| TU01 | Check menu with valid choice | Enter choice | 1 | Display statistics | As Expected | Pass |
| TU02 | Check menu with invalid choice | Enter choice | 9 | Display warning | As expected | Pass |
| TU03 | Check exporting of data in a new file with valid data | 1. Enter choice =2 2. Enter file name | Export.txt | Data saved in mentioned file | As expected | Pass |
| TU04 | Check exit function with valid choice | Enter choice | 5 | Thank you message display | As expected | Pass |
| TU05 | Check if state entered is invalid | 1. Enter choice=4 2. Enter invalid state | HG | Display error | As expected | Pass |

ACTIVITY FLOWCHART

