1. Group the passengers by age. For the given data - group the passengers into 6 age groups

0-10, 10-20, 20-30,30-40,40-50,50+

program

public class PassengerAgeGroups {

public static void main(String[] args) {

int[] ageGroups = new int[6]; // to store count of passengers in each age group

// sample data

int[] passengerAges = {23, 45, 12, 36, 17, 8, 54, 31, 28, 41, 60};

for(int age: passengerAges) {

if(age <= 10) {

ageGroups[0]++;

}

else if(age > 10 && age <= 20) {

ageGroups[1]++;

}

else if(age > 20 && age <= 30) {

ageGroups[2]++;

}

else if(age > 30 && age <= 40) {

ageGroups[3]++;

}

else if(age > 40 && age <= 50) {

ageGroups[4]++;

}

else {

ageGroups[5]++;

}

}

// print the count of passengers in each age group

System.out.println("Age group\tCount");

System.out.println("0-10\t\t" + ageGroups[0]);

System.out.println("10-20\t\t" + ageGroups[1]);

System.out.println("20-30\t\t" + ageGroups[2]);

System.out.println("30-40\t\t" + ageGroups[3]);

System.out.println("40-50\t\t" + ageGroups[4]);

System.out.println("50+\t\t" + ageGroups[5]);

}

}

Output:

Age group Count

0-10 1

10-20 2

20-30 2

30-40 2

40-50 2

50+ 2

Summary:

This program calculates the count of passengers in each age group from a given array of passenger ages. It initializes an array to store the count of passengers in each age group, and then loops through the passenger ages to increment the count of the appropriate age group in the array. Finally, it prints the count of passengers in each age group in a tabular format.