## CASE STUDY ON ARRAYS

## TRAIN SERVICES

package profit;

import java.util.Scanner;

public class Profit {

public static void main(String[] args) {

String[] departure ={"Mon\t6:04", "Mon\t9:04", "Mon\t12:04", "Mon\t15:04", "Mon\t19:04", "Tue\t6:04", "Tue\t9:04", "Tue\t12:04", "Tue\t15:04", "Tue\t19:04", "Wed\t6:04", "Wed\t9:04", "Wed\t12:04", "Wed\t15:04", "Wed\t19:04"};

int[] passengers = { 22,119,64,177,21,22,111,87,193,22,11,107,93,162,42};

Scanner vinith = new Scanner(System.in);

while (true){

System.out.println("Enter your choice");

System.out.println("1. Display the info of all trains\n2. Find the most popular train\n3. Find the least popular train\n4. Compare the popularity of 6:04 train and 9:04 train\n5. Compare the popularity of 6:04 train on Monday and Tuesday\n6. Compare the popularity of any two trains of your choice\n7. Display the list of trains with below 50 passengers\n8. Calculate the average number of passengers on 12:04 train\n9.Display the number of passengers on any train of your choice\n10. Quit");

int choice = vinith.nextInt();

switch(choice){

case 1:

System.out.println("Day\tDeparture Time\tNumber of passengers");

for (int i=0;i<departure.length;i++)

System.out.println(departure[i]+"\t\t"+passengers[i]);

break;

case 2:

int mpn = passengers[0];

String mp = departure[0];

for (int i=0; i<departure.length; i++){

if (passengers[i]>mpn){

mpn = passengers[i];

mp = departure[i];

}

}

System.out.println("The most popular train is running at "+mp+" with "+mpn+" number of passengers");

break;

case 3:

int lpn = passengers[0];

String lp = departure[0];

for (int i=0; i<departure.length; i++){

if (passengers[i]<lpn){

lpn = passengers[i];

lp = departure[i];

}

}

System.out.println("The least popular train is running at "+lp+" with "+lpn+" number of passengers");

break;

case 4:

if(passengers[0]>passengers[1])

System.out.println("6:04 is more popular than 9:04 on Monday");

else

System.out.println("6:04 is less popular than 9:04 on Monday");

if(passengers[5]>passengers[6])

System.out.println("6:04 is more popular than 9:04 on Tuesday");

else

System.out.println("6:04 is less popular than 9:04 on Tuesday");

if(passengers[10]>passengers[11])

System.out.println("6:04 is more popular than 9:04 on Wednesday");

else

System.out.println("6:04 is less popular than 9:04 on Wednesday");

break;

case 5:

if (passengers[0]>passengers[5])

System.out.println("6:04 train is more popular on Monday than Tuesday");

else if (passengers[0]<passengers[5])

System.out.println("6:04 train is more popular on Tuesday than Monday");

else

System.out.println("6:04 train is equally popular on Monday an Tuesday");

break;

case 6:

System.out.println("Enter the serial numbers of two trains to be compared");

System.out.println("S. No.\tDay\tDeparture Time");

for (int i=0;i<departure.length;i++)

System.out.println(i+"\t"+departure[i]);

int a=vinith.nextInt();

int b=vinith.nextInt();

if (passengers[a]>passengers[b])

System.out.println(departure[a]+" is more popular");

else if (passengers[a]<passengers[b])

System.out.println(departure[b]+" is more popular");

else

System.out.println("Both trains are equally popular");

break;

case 7:

System.out.println("The list of trains with below 50 passengers");

System.out.println("Day\tDeparture Time\tNumber of passengers");

for (int i=0; i<departure.length; i++){

if (passengers[i]<50){

System.out.println(departure[i]+"\t\t"+passengers[i]);

}

}

break;

case 8:

System.out.println("The average number of passengers on 12:04 trains is "+((passengers[2]+passengers[7]+passengers[12])/3.0));

break;

case 9:

System.out.println("Ënter the serial number of train for which the number of passengers info is needed");

System.out.println("S. No.\tDay\tDeparture Time");

for (int i=0;i<departure.length;i++)

System.out.println(i+"\t"+departure[i]);

int c = vinith.nextInt();

System.out.println("The number of passengers travel on "+departure[c]+" is "+passengers[c]);

break;

case 10:

System.exit(0);

default:

System.out.println("Invalid choice!");

}

}

}

**ASSIGNMENT BY**

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