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## Unit Tests:

### Station Class
Check for station name
Check for symmetric ordering to stations
Check for pair of stations

### Railways Class
Check the master data in the class

### Gender, Divyaang Classes
These are simple singletons
Check the name of each singleton class

### Date
Check various invalid date situations.
Check if the operator- is working properly in various scenarios
Check day name for various dates
Check date

### Passenger Class
Various scenarios like disability type
Invalid aadhar number or mobile Number
Invalid date of birth
Invalid name

### BookingClass
Verify various factors of each booking class
Like Name, Reservation charge, IsAC() etc

### Booking
Verify various categories of booking for different booking classes
Booking Category
Verify the names of each booking category
Check for different erroneous paths


Test Cases for Unit Tests:
Date(15,2,2021)
Output: No error, print the date

Date(32,3,2021)
Output: Bad_Date exception thrown


Date(29,2,2020)
Output: No error, print the date


Date(-10,15,2020)
Output: Bad_Date exception thrown


Date(2,2,1899)
Output: Bad_Date exception thrown


Station Class
Checking the constructor with various names
Station("")
Output: Bad_Station Exception is thrown


Station("Agrar")
Output: Bad_Station Exception is thrown


Station("Chennai")
Output: No error


Check distances between stations(all pairs will be verified while testing booking)
Station("Mumbai").GetDistance(Station("Delhi"))
Output: 1447
Station("Delhi").GetDistance(Station("Mumbai"))
Output: 1447

## Gender class
Get Names of both the classes
Male
Gender.GetName()
Output: Male

Female
Gender.GetName()
Output: Female

## Exceptions Class
We will just verify the messages thrown by each class

Passenger Class

Exception because of Aadhaar number.

Aadhaar number(given as string) = "12231456892"(11 digits)
Output: "Bad_Passenger" Exception is thrown

Aadhaar Number = "112456890012"
Output: No error because of aadhaar number

Exceptions because of Mobile number.

Mobile number(given as string) = "125588794"(9 digits)
Output: "Bad_Passenger" Exception is thrown

Mobile number = ""
Output: No error because of mobile number

Mobile Number = "8688664667"
Output: No error because of mobile number
Exceptions because of date of birth.

Date of birth = 32/2/2021
Output: "Bad_Date" exception is thrown

Date of birth = "28/3/2025"
Output: "Bad_Passenger" exception is thrown


Date of birth = "30/8/2002"
Output: No error because of date of birth

BookingClass
For each of the booking classes, we verify its properties using golden outputs. Even though most of them will be validated in the final booking tests (each class will be used at least once). For each booking class check the details.
Concessions Class
For each class, we use getConcessionFactor() and verify. Almost all will be verified during testing of booking.

SeniorCategory
Male Passenger with Date of birth = 1/1/1956
Output: No Error

Female Passenger with Date of birth = 1/1/1960
Output: No Error

Male Passenger with Date of Birth = 22/3/1962
Output: Bad_Booking exception is thrown

Female Passenger with Date of Birth = 4/4/1964
Output: Bad_Booking exception is thrown

Male Passenger with DOB = 30/08/2002
Output: Bad_Booking exception is thrown

Male Passenger with DOB = 30/8/2010
Output: No error

Female Passenger
Output: No error