**DA-2**

**JAVA PROGRAMMING**

1. Kumar is working in a shopping Mall and is responsible for collecting the vehicle parking charges throughout the day as shown in the following table based on the type of vehicle and parking time duration. Help Kumar by writing a java program to find the parking amount for each vehicle and total amount collected for the entire day. The program requires Kumar to enter the following input for each vehicle.
   1. Type of vehicle (C/T) as a single character,
   2. **In-time** in 24 hours format(hh mm) Ex 15 30
   3. **Out-time** in 24 hours format(hh mm) Ex 20 45

Sometimes, Kumar may enter wrong character as the type of vehicle, wrong **In-time** and **Out-time** (he misinterprets and type intime as outtime and vice versa) during the peak hours. Create and Raise an exception in such cases and allow him to continue entering the input after catching the exception.

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| --- | --- | --- |
| **Type of vehicle (Character)** | **Upto 3 hours** | **For each hour after 3 hours** |
| Car (C) | 100 | 30 |
| Two wheeler(T) | 40 | 10 |

1. Read the **aadhar number** and **Mobile Number** of a employee. If the **aadhar number** does not contain exactly **12** characters or if the **Mobile Number** does not contain exactly 10 characters, throw an **IllegalArgumentException**. If the Mobile Number contains any character other than a digit, raise a **NumberFormatException**. If the aadhar number contains any character other than digits and alphabets, throw a **NoSuchElementException**. If they are valid, print the message ‘valid’ else ‘invalid’. Write a java program for the above scenario with an appropiate exceptions.
2. **Write a java program for Generic classes and methods.**

**4. Write a java program for Serialization and deserialization of objects**