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#uberCars.py
class Car:
    """ Car is the baseclass. It contains a method to calculate the fare. Car types derive from this class"""
    def __init__(self):
        pass
    speed = 0
    distance_covered =0
    rate =0
    #function to set the distance travelled
    def set_distance(self,dist):
        self.distance_covered=dist
    #function to calculate fare
    def fare(self):
         return self.rate*self.distance_covered


class Sedan(Car):
    """Car Type is Sedan. Subclass of Car. Has a rate of Rs.12 per Km"""
    car_type ="Sedan"
    def __init__(self):
        print("Sedan has been alloted to you.")
        self.rate= 12
        self.speed=40


class Mini(Car):
    """Car Type is Mini. Subclass of Car. Has a rate of Rs.10 per Km"""
    car_type ="Mini"
    def __init__(self):
        print("Mini has been alloted to you")
        self.rate= 10
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        self.speed=40

class Limo(Car):
    """Car Type is Limousine. Subclass of Car. Has a rate of Rs.35 per Km"""
    car_type ="Limousine"
    def __init__(self):
        print("Limo has been alloted to you")
        self.rate= 35
        self.speed=40

class Innova(Car):
    """Car Type is Innova. Subclass of Car. Has a rate of Rs.24 per Km"""
    car_type ="Innova"
    def __init__(self):
        print("Innova has been alloted to you")
        self.rate= 24
        self.speed=40

class Indica(Car):
    """Car Type is Indica. Subclass of Car. Has a rate of Rs.12 per Km"""
    car_type ="Indica"
    def __init__(self):
        print("Indica has been alloted to you")
        self.rate= 12
        self.speed=40

class UberShare(Car):
    """Car Type is UberShare. Subclass of Car. Has a rate of Rs.5 per Km"""
    car_type ="UberShare"
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    def __init__(self):
        print("UberShare has been alloted to you")
        self.rate= 5
        self.speed=40
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#trip.py

#imports the various cars from uberCars
from uberCars import Sedan,Mini,Limo,Innova,Indica,UberShare

class Main_trip:
    #constructor assigns the id, starting place and destination of the trip.
    def __init__(self,ident,start,stop):
        self.id = ident
        self.start = start
        self.destination = stop
        self.status = "In Progress"

    #Creates an object by callling the appropriate subclass of car object
    def choose_car(self,car_name):
        str1= car_name + "()"
        self.car= eval(str1) #evaluates the expression

    #updates the status of the ride
    def end_ride(self):
        self.status ="Ride Ended"
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#Main.py
import trip
car_dict = {"1":"Sedan","2":"Mini","3":"Limo","4":"Innova","5":"Indica","6":"UberShare"}
loop = True
trip_id=100
id1=0
st_trip = []
while(loop):
   choose_menu = input("Enter a choice:\t1. Book a Ride\t2. Calculate Fare & End a Ride\t3. Get Status of a Ride\t4. Exit\n")
   if(choose_menu not in ['1','2','3','4']):
      print("Invalid Input Given")
      exit(0)
   if choose_menu=='1':
      car_choice= input("Choose a car:\t1.Sedan\t2.Mini\t3.Limo\t4.Innova\t5.Indica\t6.UberShare\n")
      if car_choice not in ['1','2','3','4','5','6']:
         print("Invalid Choice Entered")
         exit(0)
      start = input("Enter Starting Place: ")
      stop = input("Enter Destination: ")
      st_trip.append(trip.Main_trip(trip_id,start,stop))
      st_trip[id1].choose_car(car_dict[car_choice])
      print("Your trip has started")
      print("Your trip id is: ",st_trip[id1].id)
      id1 += 1
      trip_id +=1
      c=input()
   elif choose_menu =='2':
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    query_id1 = int(input("Enter the trip id: "))
    id2 = query_id1-100
    dist =int(input("Enter the distance travelled: "))
    st_trip[id2].car.set_distance(dist)
    print("Your Trip id is: %d"%(st_trip[id2].id))
    print("Vehicle used: "+st_trip[id2].car.car_type)
    print("Your Starting Place: "+ st_trip[id2].start)
    print("Your Destination: "+ st_trip[id2].destination)
    print("Your fare is: Rs.",end='')
    print(st_trip[id2].car.fare())
    st_trip[id2].end_ride()
    print("Ride Ended")
    c=input()
elif choose_menu=='3':
    query_id2 = int(input("Enter your Trip id: "))
    id3 = query_id2 -100
    print("The vehicle is: "+st_trip[id3].car.car_type)
    print("The Starting Place of your ride is: "+st_trip[id3].start)
    print("The Destination of your ride is: "+st_trip[id3].destination)
    print("The Status of your ride is: "+st_trip[id3].status)
    c =input()
else:
    loop = False
```