# 4.write a class to calculate the uber price.class UberPricingCalculator:

BASE\_FARE = {

'UberX': 5.0,

'UberXL': 7.0,

'UberBlack': 10.0,

}

RATE\_PER\_MILE = {

'UberX': 1.0,

'UberXL': 1.5,

'UberBlack': 2.0,

}

RATE\_PER\_MINUTE = {

'UberX': 0.2,

'UberXL': 0.3,

'UberBlack': 0.4,

}

SURGE\_MULTIPLIER = {

'UberX': 1.0,

'UberXL': 1.2,

'UberBlack': 1.5,

}

def \_\_init\_\_(self, service\_type, distance\_miles, duration\_minutes, surge=False):

self.service\_type = service\_type

self.distance\_miles = distance\_miles

self.duration\_minutes = duration\_minutes

self.surge = surge

def calculate\_price(self):

if self.service\_type not in self.BASE\_FARE:

return "Invalid service type"

base\_fare = self.BASE\_FARE[self.service\_type]

rate\_per\_mile = self.RATE\_PER\_MILE[self.service\_type]

rate\_per\_minute = self.RATE\_PER\_MINUTE[self.service\_type]

surge\_multiplier = self.SURGE\_MULTIPLIER[self.service\_type] if self.surge else 1.0

fare = (base\_fare +

self.distance\_miles \* rate\_per\_mile +

self.duration\_minutes \* rate\_per\_minute) \* surge\_multiplier

return fare