## input/request:

url: <a href="http://localhost:10001/api/yellowtaxi/cost/a5ca02cd-0934-4e72-bcf8-86d201679497">http://localhost:10001/api/yellowtaxi/cost/a5ca02cd-0934-4e72-bcf8-86d201679497</a> body [Json]:

```
"extra": 1,
  "fareAmount": 9,
  "improvementSurcharge": 0.3,
  "mtaTax": 0.5,
  "paymentType": 2,
  "tipAmount": 2.56,
  "tollsAmount": 2,
  "totalAmount": 2,
  "tripDistance": 1.53,
  "vendorID": 2
}
```

#### output/response:

body [Json]:

```
{
    "id": "e726e643-ad42-4c14-98c6-bcacbee53554",
    "message": "Successfully persisted",
    "status": "Success"
}
```

## **Test-Case Design:**

Apply Black Box Technique Boundary value analysis.

Table Equivalence Classes:

Input Condition	Valid Equivalence Classes	Invalid Equivalence Classes

vendorID	1 [first provider] (1) 2 [second provider] (2)	empty field (3) something different to a number (4) 3 [Not a register provider] (5) -1 [Not a register provider (negative)] (6)
tripDistance	a valid distance (19)	empty field (20) something different to a number (21) 0 distance (22) a negative distance (23)
Payment_type	1 (59) 6 (60)	empty field (61) something different to a number (62) a negative number (63) 0 (64) 7 (65)
fareAmount	a positive amount (66)	empty field (67) something different to a number (68) 0 (69) a negative number (70)
extra	0 (71) a positive number (72)	empty field (73) something different to a number (74) a negative number (75)
mtaTax	0 (76) a positive number (77)	empty field (78) something different to a number (79) a negative number (80)
tipAmount	0 (81) a positive number (82)	empty field (83) something different to a number (84) a negative number (85)
tollsAmount	0 (86) a positive number (87)	empty field (88) something different to a number (89) a negative number (90)
improvementSurcharge	0 (91) a positive number (92)	empty field (93) something different to a number (94) a negative number (95)
totalAmount	a positive number (96)	empty field (97) 0 (98) something different to a number (99) a negative number (100)

Write test cases that cover the classes.

## Table test valid cases:

Number	Test case	Cases that cover	expected output/response
1	{ "vendorID": 1, "tripDistance": 1.53, "paymentType": 2, "fareAmount": 9, "extra": 0, "mtaTax": 0, "tipAmount": 0, "tollsAmount": 0,	(1) (7) (13) (19) (24) (30) (36) (43) (47) (53) (59) (66) (71)	ok

	"improvementSurcharge": 0, "totalAmount": 2.0 }	(76) (81) (86) (91) (96)	
2	{ "vendorID": 2, "tripDistance": 1.53, "paymentType": 2, "fareAmount": 9, "extra": 1, "mtaTax": 0.5, "tipAmount": 14.0, "tollsAmount": 1, "improvementSurcharge": 0.3, "totalAmount": 2.0 }	(14) (25) (31) (37) (44) (48) (54) (60) (72) (77) (82) (87) (92)	ok

## Table test invalid cases:

Number	Test case	Case that cover	expected output/response
3	{ "vendorID": , "tripDistance": 1.53  "paymentType": 2, "fareAmount": 9,  "extra": 0, "mtaTax": 0, "tipAmount": 0,  "tollsAmount": 0,  "improvementSurcharge": 0,  "totalAmount": 2.0 }	empty field (3)	rejection request
4	{ "vendorID": A, "tripDistance": 1.53  "paymentType": 2, "fareAmount": 9,  "extra": 0, "mtaTax": 0, "tipAmount": 0,  "tollsAmount": 0,  "improvementSurcharge": 0,  "totalAmount": 2.0 }	something different to a number (4)	rejection request
5	{ "vendorID": 3, "tripDistance": 1.53  "fareAmount": 9, "extra": 0, "mtaTax": 0,  "tipAmount": 0, "tollsAmount": 0,  "improvementSurcharge": 0,  "totalAmount": 2.0 }	3 [Not a register provider] (5)	bad request
6	{ "vendorID": -1, "tripDistance": 1.53, "paymentType": 2, "fareAmount": 9, "extra": 0, "mtaTax": 0, "tipAmount": 0, "tollsAmount": 0, "improvementSurcharge": 0, "totalAmount": 2.0 }	-1 [Not a register provider (negative)] (6)	bad request
17	{ "vendorID": 1, "tripDistance": ,   "paymentType": 2, "fareAmount": 9,   "extra": 0, "mtaTax": 0, "tipAmount": 0,	empty field (20)	rejection request

	"tollsAmount": 0, "improvementSurcharge": 0, "totalAmount": 2.0 }		
18	{ "vendorID": 1, "tripDistance": "A"  "paymentType": 2, "fareAmount": 9,  "extra": 0, "mtaTax": 0, "tipAmount": 0,  "tollsAmount": 0,  "improvementSurcharge": 0,  "totalAmount": 2.0 }	something different to a number (21)	rejection request
19	{ "vendorID": 1, "tripDistance": 0,  "paymentType": 2, "fareAmount": 9,  "extra": 0, "mtaTax": 0, "tipAmount": 0,  "tollsAmount": 0,  "improvementSurcharge": 0,  "totalAmount": 2.0 }	0 distance (22)	bad request
20	{ "vendorID": 1, "tripDistance": -1 "paymentType": 2, "fareAmount": 9, "extra": 0, "mtaTax": 0, "tipAmount": 0, "tollsAmount": 0, "improvementSurcharge": 0, "totalAmount": 2.0 }	a negative distance (23)	bad request
44	{ "vendorID": 1, "tripDistance": 1,   "paymentType": , "fareAmount": 9,   "extra": 0, "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	empty field (61)	rejection request
45	{ "vendorID": 1, "tripDistance": 1,   "fareAmount": 9, "extra": 0, "mtaTax": 0,   "tipAmount": 0, "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	something different to a number (62)	rejection request
46	{ "vendorID": 1, "tripDistance": 1,   "fareAmount": 9, "extra": 0, "mtaTax": 0,   "tipAmount": 0, "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	a negative number (63)	bad request
47	{ "vendorID": 1, "tripDistance": 1,	0 (64)	bad request

	"paymentType": 0, "fareAmount": 9,  "extra": 0, "mtaTax": 0, "tipAmount": 0,  "tollsAmount": 0,  "improvementSurcharge": 0,  "totalAmount": 2.0 }		
48	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 7, "fareAmount": 9,   "extra": 0, "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	7 (65)	bad request
49	{ "vendorID": 1, "tripDistance": 1,    "paymentType": 1, "fareAmount": ,    "extra": 0, "mtaTax": 0, "tipAmount": 0,    "tollsAmount": 0,    "improvementSurcharge": 0,    "totalAmount": 2.0 }	empty field (67)	rejection request
50	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": "A",   "extra": 0, "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	something different to a number (68)	rejection request
51	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 0,   "extra": 0, "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	0 (69)	bad request
52	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": -1,   "extra": 0, "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	a negative number (70)	bad request
53	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": , "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,	empty field (73)	rejection request

	"improvementSurcharge": 0, "totalAmount": 2.0 }		
54	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": "A", "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	something different to a number (74)	rejection request
55	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": -1, "mtaTax": 0, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	a negative number (75)	bad request
56	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": , "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	empty field (78)	rejection request
57	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": "A", "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	something different to a number (79)	rejection request
58	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": -1, "tipAmount": 0,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	a negative number (80)	bad request
59	{ "vendorID": 1, "tripDistance": 1,    "paymentType": 1, "fareAmount": 1,    "extra": 1, "mtaTax": 1, "tipAmount": ,    "tollsAmount": 0,    "improvementSurcharge": 0,    "totalAmount": 2.0 }	empty field (83)	rejection request

60	{ "vendorID": 1, "tripDistance": 1, "paymentType": 1, "fareAmount": 1, "extra": 1, "mtaTax": 1, "tipAmount": "A", "tollsAmount": 0, "improvementSurcharge": 0, "totalAmount": 2.0 }	something different to a number (84)	rejection request
61	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": -1,   "tollsAmount": 0,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	a negative number (85)	bad request
62	{ "vendorID": 1, "tripDistance": 1   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": 1,   "tollsAmount": ,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	empty field (88)	rejection request
63	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": 1,   "tollsAmount": "A",   "improvementSurcharge": 0,   "totalAmount": 2.0 }	something different to a number (89)	rejection request
64	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": 1,   "tollsAmount": -1,   "improvementSurcharge": 0,   "totalAmount": 2.0 }	a negative number (90)	bad request
65	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": 1,   "tollsAmount": 1,   "improvementSurcharge": ,   "totalAmount": 2.0 }	empty field (93)	rejection request
65	{ "vendorID": 1, "tripDistance": 1, "paymentType": 1, "fareAmount": 1, "extra": 1, "mtaTax": 1, "tipAmount": 1,	something different to a number (94)	rejection request

	"tollsAmount": 1, "improvementSurcharge": "A", "totalAmount": 2.0 }		
66	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": 1,   "tollsAmount": 1,   "improvementSurcharge": -1,   "totalAmount": 2.0 }	a negative number (95)	bad request
67	{ "vendorID": 1, "tripDistance": 1,    "paymentType": 1, "fareAmount": 1,    "extra": 1, "mtaTax": 1, "tipAmount": 1,    "tollsAmount": 1,    "improvementSurcharge": 1,    "totalAmount": }	empty field (97)	rejection request
68	{ "vendorID": 1, "tripDistance": 1,    "paymentType": 1, "fareAmount": 1,    "extra": 1, "mtaTax": 1, "tipAmount": 1,    "tollsAmount": 1,    "improvementSurcharge": 1,    "totalAmount": "A" }	something different to a number (98)	rejection request
69	{ "vendorID": 1, "tripDistance": 1,   "paymentType": 1, "fareAmount": 1,   "extra": 1, "mtaTax": 1, "tipAmount": 1,   "tollsAmount": 1,   "improvementSurcharge": 1,   "totalAmount": 0 }	0 (99)	bad request
70	{ "vendorID": 1, "tripDistance": 1,    "paymentType": 1, "fareAmount": 1,    "extra": 1, "mtaTax": 1, "tipAmount": 1,    "tollsAmount": 1,    "improvementSurcharge": 1,    "totalAmount": -1 }	a negative number (100)	bad request