**Javascript - Day -8 : OOP**

Question 1 <https://github.com/rvsp/typescript-oops/blob/master/Practice/Movie.md>

Code for question 1:-

*class* Movie {

*constructor*(*title*, *studio*, *rating* = "PG") {

    this.title = *title*;

    this.studio = *studio*;

    this.rating = *rating*;

  }

}

*function* create\_object(*title*, *studio*, *rating*) {

  return new Movie(*title*, *studio*, *rating*);

}

*function* getPG(*list*) {

  return *list*.filter((*film*) *=>* *film*.rating === "PG");

}

*let* film1 = new Movie("Lion King", "Simba", "G");

*let* film2 = new Movie("La Casa De Papel", "Netflix");

*let* film3 = new Movie("The 100", "NCS", "PG13");

*let* film4 = new Movie("Siren", "Box Office");

*let* film5 = new Movie("ZOO", "Lions Gate");

console.log("\nBelow is the output for the question 1(a)\n");

console.log(film1);

console.log("\nBelow is the output for the question 1(b)\n");

console.log(film2);

console.log("\nBelow is the output for the question 1(c)\n");

console.log(getPG([film1, film2, film3, film4, film5]));

console.log("\nBelow is the output for the question 1(d)\n");

*let* film = create\_object("Casino Royale", "Eon Productions", "PG13");

console.log(film);

Output for question 2:-

[Running] node "c:\Users\klvpf\Desktop\Courses\Guvi\Task\Day 7 Task\question1.js"

Below is the output for the question 1(a)

Movie { title: 'Lion King', studio: 'Simba', rating: 'G' }

Below is the output for the question 1(b)

Movie { title: 'La Casa De Papel', studio: 'Netflix', rating: 'PG' }

Below is the output for the question 1(c)

[

  Movie { title: 'La Casa De Papel', studio: 'Netflix', rating: 'PG' },

  Movie { title: 'Siren', studio: 'Box Office', rating: 'PG' },

  Movie { title: 'ZOO', studio: 'Lions Gate', rating: 'PG' }

]

Below is the output for the question 1(d)

Movie {

  title: 'Casino Royale',

  studio: 'Eon Productions',

  rating: 'PG13'

}

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Question 2 <https://github.com/rvsp/typescript-oops/blob/master/Practice/class-circle.md>

Code for question 2:-

*class* Circle {

*constructor*(*radius*, *color*) {

    this.radius = *radius*;

    this.color = *color*;

  }

  getRadius() {

    return this.radius;

  }

  setRadius(*radius*) {

    this.radius = *radius*;

  }

  getColor() {

    return this.color;

  }

  setColor(*color*) {

    this.color = *color*;

  }

  toString() {

    return `Circle [radius=${this.radius},color=${this.color}]`;

  }

  getArea() {

    return Math.PI \* Math.pow(this.radius, 2);

  }

  getCircumference() {

    return 2 \* Math.PI \* this.radius;

  }

}

*let* c1 = new Circle(Math.ceil(Math.random() \* 5), "green");

c1.setRadius(2.5);

console.log(c1.getRadius());

c1.setColor("pink");

console.log(c1.getColor());

console.log(c1.toString());

console.log(c1.getArea());

console.log(c1.getCircumference());

Output for Question 2 :-

[Running] node "c:\Users\klvpf\Desktop\Courses\Guvi\Task\Day 7 Task\question2.js"

2.5

pink

Circle [radius=2.5,color=pink]

19.634954084936208

15.707963267948966

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Question 3 Write a “person” class to hold all the details.

**Assumption Made for Person: -** name,technology,,experience in years, email, phone, ...languages

Code for Question 3 :-

*class* Person {

*constructor*(*name*, *technology*, *experience\_years*, *email*, *phone*, ...*languages*) {

    this.name = *name*;

    this.technology = *technology*;

    this.experience\_years = *experience\_years*;

    this.email = *email*;

    this.phone = *phone*;

    this.languages = *languages*;

  }

}

*let* klvp = new Person(

  "Lakshmi Vara Prasad Kuna",

  "Full Stack Developer",

  2,

  "klvp@gmail.com",

  8328073469,

  "python",

  "javascript",

  "C Pragramming",

  "reactJS",

  "nodeJS",

  "mongoDB",

  "HTML5",

  "CSS3"

);

console.log(klvp);

Output for Question 3:-

[Running] node "c:\Users\klvpf\Desktop\Courses\Guvi\Task\Day 7 Task\question3.js"

Person {

  name: 'Lakshmi Vara Prasad Kuna',

  technology: 'Full Stack Developer',

  experience\_years: 2,

  email: 'klvp@gmail.com',

  phone: 8328073469,

  languages: [

    'python',

    'javascript',

    'C Pragramming',

    'reactJS',

    'nodeJS',

    'mongoDB',

    'HTML5',

    'CSS3'

  ]

}

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Quetoin 4 write a class to calculate uber price.

**Assumption Made for Uber Price Calculation: -**

* Car type : Mini(3 seat) or Prime(4 seat) or Jumbo(7 seat)
* AC is ON(Rs 1 per KM) or OFF(Rs 0 per KM) (By default AC is OFF)
* KM
* Tax

Code for Question 4:-

*class* Uber {

  // car types : mini(3 seater) or prime(4 seater) or jumbo(7 seater)

*constructor*(*car\_type*, *km*, *ac* = false) {

    this.car\_type = *car\_type*;

    this.km = *km*;

    this.ac = *ac*;

    this.service\_charge = 12;

    this.booking\_fee = 10;

    this.tax = this.service\_charge + this.booking\_fee;

  }

  // get the price per km based on car type

  getprice() {

    if (this.ac != false) this.ac = 1;

    else this.ac = 0;

    if (this.car\_type == "mini") return (10 + this.ac) \* this.km + this.tax;

    else if (this.car\_type == "prime")

      return (8.5 + this.ac) \* this.km + this.tax;

    return (8 + this.ac) \* this.km + this.tax;

  }

}

*let* mini\_ac = new Uber("mini", 10, true);

console.log(`Charge for mini AC car for 10KM is : ${mini\_ac.getprice()}`);

*let* mini\_non\_ac = new Uber("mini", 10);

console.log(

  `Charge for mini non AC car for 10KM is : ${mini\_non\_ac.getprice()}`

);

*let* prime\_ac = new Uber("prime", 10, true);

console.log(`Charge for prime AC car for 10KM is : ${prime\_ac.getprice()}`);

*let* prime\_non\_ac = new Uber("prime", 10);

console.log(

  `Charge for prime non AC car for 10KM is : ${prime\_non\_ac.getprice()}`

);

*let* jumbo\_ac = new Uber("jumbo", 10, true);

console.log(`Charge for jumbo AC car for 10KM is : ${jumbo\_ac.getprice()}`);

*let* jumbo\_non\_ac = new Uber("jumbo", 10);

console.log(

  `Charge for jumbo non AC car for 10KM is : ${jumbo\_non\_ac.getprice()}`

);

Output for Question 4:-

[Running] node "c:\Users\klvpf\Desktop\Courses\Guvi\Task\Day 7 Task\queation4.js"

Charge for mini AC car for 10KM is : 132

Charge for mini non AC car for 10KM is : 122

Charge for prime AC car for 10KM is : 117

Charge for prime non AC car for 10KM is : 107

Charge for jumbo AC car for 10KM is : 112

Charge for jumbo non AC car for 10KM is : 102

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