

02

Advance JS Exercise

1. Write a class with name Employee and basic as its data member, to find the gross pay of an employee for the following allowances and deduction. Use meaningful variables. Dearness Allowance = 25% of the Basic Pay House Rent Allowance = 15% of Basic Pay Provident Fund = 8.33% of Basic Pay Net Pay = Basic Pay + Dearness Allowance + House Rent Allowance Gross Pay = Net Pay – Provident Fund

Ans->

```
1 class Employee
2 {
3   constructor( b)
4   {
5     this.basic=b;
6   }
7   calc()
8   {
9     let pf, gp, np, hra, da;
10    da=25/100.0*this.basic;
11    hra=15/100.0*this.basic;
12    pf=8.33/100*this.basic;
13    np=this.basic+da+hra;
14    gp=np-pf;
15    console.log("Gross Pay="+gp);
16  }
17 }
18
19 let e1=new Employee(200000);
20 e1.calc()
```

Q2.

Define a class 'Salary' described as below:

Data Members:

Name, Address, Phone, Subject Specialisation, Monthly Salary, Income Tax.

Member methods:

i. To accept the details of a teacher including the monthly salary.

ii. To display the details of the teacher.

iii. To compute the annual Income Tax as 5% of the annual salary above ₹ 1,75,000/-.

Write a main method to create object of the class and call the above member method.

```
class Salary
{
    Name; Address; subSpe;mSal;it;phone;
    input()
    {
        this.Name=prompt('Enter your this.Name:')
        this.Address=prompt('Enter your this.Address:')
        this.subSpe=prompt('Enter Subject Specialization:')
        this.phone=prompt('Enter this.phone No.:')
        this.mSal=parseInt(prompt('Enter monthly salary:'))
    }
    display()
    {
        document.write('this.Name: '+this.Name);
        document.write('this.Address: '+this.Address);
        document.write('Subject Specialization: '+this.subSpe);
        document.write('this.phone No.: '+ this.phone);
        document.write('Monthly salary: '+this.mSal);
    }
    calc()
    {
        let aSal;
        aSal=12*this.mSal;
        if(aSal>175000)
            this.it=5/100.0*(aSal-175000);
        else
            this.it=0;
    }
}
```

3. Define a class 'Student' described as below:

Data members/instance variables: name,age,m1,m2,m3 (marks in 3 subjects), maximum, average
Member methods:

i. To accept the details of a student.

ii. To compute the average and the maximum out of three marks.

iii. To display the name, age, marks in three subjects, maximum and average.

Write a main method to create an object of a class and call the above member methods.

```
class Student
{
    name;age; m1; m2; m3; max; avg;
    input()
    {
        this.name=prompt('Enter Your Name ')
        this.m1=parseInt(prompt('Enter M1 '))
        this.m2=parseInt(prompt('Enter M2 '))
        this.m3=parseInt(prompt('Enter M3'))
        this.age=parseInt(prompt('Enter age'))
    }
    display()
    {
        document.write('Name: '+this.name);
        document.write('Marks: '+this.m1+', '+this.m2+ 'and' +this.m3);
        document.write('Maximum Marks: '+this.max);
        document.write('Average: '+ this.avg);
    }
    compute()
    {
        max=Math.max(Math.max(this.m1,m2),this.m3);
        this.avg=this.m1+this.m2+this.m3/3;
    }
}
let ob=new Student();
ob.input();
ob.compute();
ob.display();
```

4. Define a class Employee having the following description:

Instance variables:

int pan	to store personal account number
String name	to store name
double tax_income	to store annual taxable income
double tax	to store tax that is calculated

Member functions:

input ()	Store the pan number, name, taxable income
calc ()	Calculate tax for an employee
display ()	Output details of an employee

Write a program to compute the tax according to the given conditions and display the output as per the given format.

Total Annual Taxable Income	Tax Rate
Upto ₹ 1,00,000	No tax
From 1,00,001 to 1,50,000	10% of the income exceeding ₹ 1,00,000
From 1,50,001 to 2,50,000	₹ 5000 + 20% of the income exceeding ₹ 1,50,000
Above ₹ 2,50,000	₹ 25,000 + 30% of the income exceeding ₹ 2,50,000

Output:

Pan Number	Name	Tax-income	Tax
—	—	—	—

```
class Employee
{
    pan; name; tax_income; tax;
    input ()
    {
        this.pan=prompt('Enter Your this.pan')
        this.name=prompt('Enter Your this.name')
        this.tax_income=parseInt(prompt('Enter Your TAX INCOME '))
    }
    display()
    {
        document.write('this.pan Number this.name Tax-income Tax');
        document.write(this.pan+' '+this.name+' '+this.tax_income+' '+this.tax);
    }
    calc()
    {
        if(this.tax_income<=100000)
            this.tax=0;
        else if(this.tax_income>100000 && this.tax_income<=150000)
            tax=10/100.0*(this.tax_income-100000);
        else if(this.tax_income>150001 && this.tax_income<=250000)
            tax=5000+20/100.0*(this.tax_income-150000);
        else
            tax=25000+30/100.0*(this.tax_income-250000);
    }
}
let emp= new Employee()
emp.input()
emp.calc()
emp.display()
```

5. Define a class called Mobike with the following description:

Instance variables/ Data members:

bno : to store the bike's number
phno : to store the phone number of the customer
name : to store the name of the customer
days : to store the number of days the bike is taken on rent
charge : to calculate and store the rental charge

Member methods:

void input () : to input and store the detail of the customer
void compute () : to compute the rental charge. The rent for a Mobike is charged on the following basis
First five days : ₹ 500 per day
Next five days : ₹ 400 per day
Rest of the days : ₹ 200 per day
void display () : to display the details in the following format:

Bike No.	Phone No.	Name	No. of days	Charge
-----	-----	-----	-----	-----

You Need to solve it your own

6. Write a program with the following specifications:

Class name : Student
Data members :
name : To store the name of a student
hindi : To store the marks in hindi subject
english : To store the marks in english subject
maths : To store the marks in mathematics
computer : To store the marks in computer
average : To store the average of the marks obtained
grade : To store the grade depending upon the average.

Member methods:

void accept() : to accept name and marks in the 4 subjects.
void calcavg() : to calculate and store the grade according to the following slabs:

Average marks	Grade Obtained
90 and above	A++
Between 75 to 89 (both inclusive)	A

7. Design class called Bank with the following descriptions:

Data members:

name : to store the name of the depositor
acno : to store the account number
type : to store type of the account
bal : to store the balance amount in the account

Member functions:

initialise() : to assign the data members with any value.
depo(int a) : where a is the amount to be deposited and the variable bal is to be updated.
withdraw(int a) : where a is the amount to be withdrawn after checking the balance (Minimum balance should be ₹ 1000) and the variable bal is to be updated.
print() : to print all the details.

Write the main method to create the object of the class and call the above method.

8. Define a class Bill as described below:

Data members are:

name	:	to store the name of the consumer
consumerno	:	to store the consumer number
unitconsumed	:	to store the unit consumed
Member methods are :		
datainput()	:	to read the data of a person
compute()	:	to calculate the bill amount as per criteria.

Units Consumed	Rate
Up to 100 units	1.20
More than 100 and up to 200 units	2.20

More than 200 and up to 300 units	3.20
Above 300 units	4.00

Display() – To display the output as per the format:

Consumer Name	Consumer No	Unit Consumed	Bill Amount
---------------	-------------	---------------	-------------

9. Write a program with the following specifications:

Class : Empl

Data Members:

Emp_No : To store the employee number
Name : To store the name of the employee
Basic : To store the basic salary of an employee
DA : To store the dearness allowance of an employee.
HRA : To store the House Rent Allowance of an employee
TA : To store the Travelling Allowance of an employee
PF : To store the Provident Fund of an employee
Gross : To store the Gross Salary

Member Methods:

get () : To accept Employee No., Name and Basic Salary of the employees
calcu () : To calculate the Gross Salary based on the following condition:

Basic Salary	DA(%)	TA(%)	HRA(%)	PF(%)
>=20,000	53	12	10	8
>=10,000 to <20,000	45	10	12	7.5
< 10,000	40	8	14	7

Gross Salary = (Basic Salary + DA + TA + HRA) – PF

display () : To display the following data in given format:

EMPLOYEE No. NAME GROSS SALARY PF

Write a main method to create the object of the above class and call the above method to calculate and print the Employee No., Name, Gross Salary and PF of an employee.

10. Define a class called Library with the following description:

Instance variables/data members:

int acc_num : stores the accession number of books
String title : stores the title of book
String author : stores the name of author

Member methods:

void input() : to input and store the accession number, title and author
void compute() : to accept the number of days late, calculate and display the fine charged the rate of ₹ 2 per day
void display() : to display the details in the following format:

Accession number	Title	Author
.....

Write the main method to create an object of the class and call the above member methods.

ALL THE BEST!!!