

### Abstract Data Type : emp\_type() and cal\_sal():-

#### SQL Query:

```
create type emp as object(  
    eid number,  
    ename varchar2(30),  
    emp_addr varchar2(10),  
    doj date,  
    salary number,  
    MEMBER Function cal_sal Return number  
)not final;
```

```
create type body emp as  
    member function cal_sal return number is  
    begin  
        return salary;  
    end;  
end;
```

```
create table employee of emp;
```

```
insert into employee values(emp(101,'Onkar','Talere','12-May-2020',200000));  
insert into employee values(emp(102,'Adi','Tale','12-May-2010',22300));  
insert into employee values(emp(103,'Om','kale','12-May-2022',2034200));  
insert into employee values(emp(104,'Raju','Goa','12-May-2012',2000));  
insert into employee values(emp(105,'Pandu','Pune','12-May-2000',202300));
```

```
select * from employee;
```

EID	ENAME	EMP_ADDR	DOJ	SALARY
101	Onkar	Talere	12-MAY-20	200000
102	Adi	Tale	12-MAY-10	22300
103	Om	kale	12-MAY-22	2034200
104	Raju	Goa	12-MAY-12	2000
105	Pandu	Pune	12-MAY-00	202300

```
select e.cal_sal() from employee e;
```

E.CAL_SAL()
200000
22300
2034200
2000
202300

```
select e.ename , e.cal_sal() from employee e;
```

ENAME	E.CAL_SAL()
Onkar	200000
Adi	22300
Om	2034200
Raju	2000
Pandu	202300

```
create type eng under emp
(
    eng_type varchar2(10),
    Member function emp_type return varchar2
);
```

```
create type body eng as
    Member function emp_type return varchar2 is
    Begin
        return 'Engineer';
    end;
end;
```

```
create table engineer of eng;
```

```
insert into engineer values(1,'Onkar','Goa','22-Dec-2008',30000,'Sr');
insert into engineer values(2,'Swapnali','Kolhapur','2-Dec-2008',30000,'Sr');
insert into engineer values(3,'Aditya','Goa','22-May-2008',30000,'Sr');
insert into engineer values(4,'Pandu','Dubai','22-Dec-2008',30000,'Sr');
insert into engineer values(5,'Sneha','Goa','22-Jun-2008',30000,'Sr');
```

```
select * from engineer;
```

EID	ENAME	EMP_ADDR	DOJ	SALARY	ENG_TYPE
1	Onkar	Goa	22-DEC-08	30000	Sr
2	Swapnali	Kolhapur	02-DEC-08	30000	Sr
3	Aditya	Goa	22-MAY-08	30000	Sr
4	Pandu	Dubai	22-DEC-08	30000	Sr
5	Sneha	Goa	22-JUN-08	30000	Sr

select e.cal\_sal() from engineer e;

E.CAL_SAL()
30000
30000
30000
30000
30000

select e.ename , e.cal\_sal() from engineer e;

ENAME	E.CAL_SAL()
Onkar	30000
Swapnali	30000
Aditya	30000
Pandu	30000
Sneha	30000

select e.emp\_type() from engineer e;

E.EMP_TYPE()
Engineer
Engineer
Engineer
Engineer
Engineer

select e.ename , e.emp\_type() from engineer e;

ENAME	E.EMP_TYPE()
Onkar	Engineer
Swapnali	Engineer
Aditya	Engineer
Pandu	Engineer
Sneha	Engineer

select e.ename , e.emp\_type() , e.cal\_sal() from engineer e;

ENAME	E.EMP_TYPE()	E.CAL_SAL()
Onkar	Engineer	30000
Swapnali	Engineer	30000
Aditya	Engineer	30000
Pandu	Engineer	30000
Sneha	Engineer	30000