

# Aim:

Write a C program to print the address of a variable using a pointer.

# **Code:**

```
#include<stdio.h>

int main(){
    int num = 50;
    int*ptr = &num;
    printf("The address of num is: %p\n",ptr);
    return 0;
}
```

```
PS C:\Users\ASUS\Desktop\html> cd
• The address of num is 0061FEC8
• PS C:\Users\ASUS\Desktop\html> []
```



#### Aim:

Write a C program to create a Calculator using a pointer.

#### Code:

```
#include <stdio.h>
int main() {
        float num1, num2, *ptr1, *ptr2;
        char operator;
        printf("Enter two numbers: ");
        scanf("%f %f", &num1, &num2);
        ptr1 = &num1;
        ptr2 = &num2;
        printf("Enter an operator (+, -, *, /): ");
        scanf(" %c", &operator);
        switch(operator) {
        case '+':
        printf("%.2f + %.2f = %.2f", *ptr1, *ptr2, *ptr1 + *ptr2);
        break;
        case '-':
        printf("%.2f - %.2f = %.2f", *ptr1, *ptr2, *ptr1 - *ptr2);
        break;
        case '*':
        printf("%.2f * %.2f = %.2f", *ptr1, *ptr2, *ptr1 * *ptr2);
        break;
        case '/':
        printf("%.2f / %.2f = %.2f", *ptr1, *ptr2, *ptr1 / *ptr2);
        break;
        default:
        printf("Error: Invalid operator");
        break;
return 0;
}
```



```
Enter two numbers: 10
Enter an operator (+, -, *, /): +
10.00 + 20.00 = 30.00
```



# Aim:

Write a C program to swap the two values using call by value and call by reference.

```
#include <stdio.h>
// function declaration for swap by value
void swapByValue(int x, int y);
// function declaration for swap by reference
void swapByReference(int *x, int *y);
int main() {
  int a = 10, b = 20;
  // display the original values
  printf("Before swapping, a = \%d and b = \%d \ n", a, b);
  // swap by value
  swapByValue(a, b);
  printf("After swap by value, a = \%d and b = \%d\n", a, b);
  // swap by reference
  swapByReference(&a, &b);
  printf("After swap by reference, a = \%d and b = \%d\n", a, b);
   return 0;
```



```
// function definition for swap by value
void swapByValue(int x, int y) {
  int temp = x;
  x = y;
  y = temp;
}

// function definition for swap by reference
void swapByReference(int *x, int *y) {
  int temp = *x;
  *x = *y;
  *y = temp;
}
```

```
Before swapping, a = 10 and b = 20
After swap by value, a = 10 and b = 20
After swap by reference, a = 20 and b = 10
```

# Practical - 4



### Aim:

Define a structure type struct personal that would contain person name, Date of birth and age using this structure to read this information of 4 people and display the same.

```
#include<stdio.h>
#include<string.h>
struct personal
{
  char name[50];
  char DOB[50];
  int age;
};
void main()
{
  struct personal p1,p2,p3,p4;
  strcpy( p1.name,"Darshan");
  strcpy(p1.DOB,"22-03-2004");
  p1.age=18;
  strcpy( p2.name,"Ronak");
  strcpy(p2.DOB,"29-03-2005");
  p2.age=17;
  strcpy( p3.name,"Parth");
  strcpy( p3.DOB,"15-09-2004");
  p3.age=18;
  strcpy( p4.name,"Keyurbhai");
  strcpy( p4.DOB,"06-07-2003");
  p4.age=18;
```



```
printf("Person1 name: %s\n",p1.name);
printf("Person1 DOB: %s\n",p1.DOB);
printf("Person1 age: %d\n",p1.age);

printf("Person2 name: %s\n",p2.name);
printf("Person2 DOB: %s\n",p2.DOB);
printf("Person2 age: %d\n",p2.age);

printf("Person3 name: %s\n",p3.name);
printf("Person3 DOB: %s\n",p3.DOB);
printf("Person3 age: %d\n",p3.age);

printf("Person4 name: %s\n",p4.name);
printf("Person4 DOB: %s\n",p4.DOB);
printf("Person4 age: %d\n",p4.age);
}
```

Person1 name: Darshan Person1 DOB: 22-03-2004

Person1 age: 18

Person2 name: ronak

Person2 DOB: 29-03-2005

Person2 age: 17

Person3 name: Parth

Person3 DOB: 15-09-2004

Person3 age: 18

Person4 name: Keyurbhai Person4 DOB: 06-07-2003

Person4 age: 18



### Aim:

Write a C program to calculate the sum of n numbers entered by the user using dynamic memory allocation.

```
#include<stdio.h>
int main()
{
    int i,n,*ptr, sum=0;
    printf("Enter num of elements: ");
    scanf("%d",&n);
    ptr=(int*) malloc(n*sizeof(int));
    //if memory cannot be allocated
    if(ptr==NULL)
    {
        printf("Error! memory not allocated");
    }
}
```



```
exit(0);
}
printf("Enter elements: ");
for(i=0;i<n;++i)
{
    scanf("%d",ptr+i);
    sum+=*(ptr+i);
}
printf("Sum= %d",sum);
//deallocating the memory
free(ptr);
return 0;
}</pre>
```

```
Enter num of elememts: 4
Enter elements: 5 9 10 2
Sum= 26
PS F:\OJT Practicals>
```



### Aim:

A file named "New" contains a series of integer numbers. Write a c program to read all numbers from a file and then copy all odd numbers into a file named "odd" and write all even numbers into a file named "even". Then display the values of files odd and even on the screen.

```
#include<stdio.h>
int main()
{
    FILE *f1,*f2,*f3;
    int n,i;
    printf("\nWrite the numbers in file.\n Enter -1 to stop.\n\n");
    f1=fopen("New","w");
    for(i=1;i<=10;i++)
{
    scanf("%d",&n);</pre>
```



```
if(n==-1) break;
    putw(n,f1);
 fclose(f1);
 f1=fopen("New","r");
 f2=fopen("ODD","w");
 f3=fopen("EVEN","w");
 while((n=getw(f1)) !=EOF) {
   if(n\%2 == 0)
       putw(n,f3);
   else
       putw(n,f2);
 }
 fclose(f1);
 fclose(f2);
fclose(f3);
f2=fopen("ODD","r");
f3=fopen("EVEN","r");
printf("\nContents of ODD file\n");
while((n=getw(f2)) != EOF)
    printf("%d\t",n);
printf("\n\nContents of EVEN file\n\n");
while((n=getw(f3)) !=EOF)
    printf("%d\t",n);
fclose(f2);
fclose(f3);
return 0;
```

}



```
Write the numbers in file.
   Enter -1 to stop.

0 1 2 3 4 5 6 7 8 9 -1

Contents of ODD file

1     3     5     7     9

Contents of EVEN file

0     2     4     6     8
PS F:\C\File> ■
```

### Practical - 7

#### Aim:

Write a C++ program to Check if the number is prime or not using a function.

```
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```

```
cout<<"Number is not Prime."<<endl;
flag=1;
break;
}
if (flag==0)
    cout << "Number is Prime."<<endl;
return 0;
}</pre>
```

```
Enter the Number to check Prime: 12
Number is not Prime.

PS F:\OJT Practicals> cd "f:\OJT Practic
Enter the Number to check Prime: 5
Number is Prime.

PS F:\OJT Practicals>
```



# Aim:

Write a C++ program that prompts the user to enter a letter and check whether a letter is a vowel or constant.

```
#include <iostream>
using namespace std;
int main() {
    char c;
    cout<<"Enter any character: ";
    cin>>c;
    if (c == 'a' || c == 'e' || c == 'i' || c == 'o' || c == 'u')
        cout <<c<< " is a Vowel" << endl;
    else
        cout <<c<< " is a Consonant" << endl;
    return 0;
}</pre>
```



```
Enter any character: a
a is a Vowel
PS F:\OJT Practicals> cd "f
Enter any character: p
p is a Consonant
PS F:\OJT Practicals>
```

# Practical - 9

### Aim:

Write a C++ program to demonstrate the concept of constructor and destructor.

```
#include<iostream>
using namespace std;
class rectangle
{
    int length,width;
    public:
        rectangle() //Constructor
    {
        length=0;
        width=0;
        cout<<"\nConstructor Called: ";
    }
    ~rectangle() //Destructor
    {
        rectangle() //Destructor
    }
}</pre>
```



```
//other functions for reading, writing and processing can be written here
};
int main()
{
    rectangle x;
    //default constructor is called
}
```

Constructor Called:

Destructor Called: PS F:\OJT Practicals>



## Aim:

Create a class student that stores roll\_no, name. Create a class test that stores marks obtained in five subjects. Class result derived from student and test contains the total marks and percentage obtained in test. Input and display information of a student.

```
#include <iostream>
    #include <string>
    using namespace std;
class Student {
        int roll_no;
        string name;
        public:
        void getStudentInfo() {
            cout << "Enter roll number: ";
            cin >> roll_no;
            cout << "Enter name: ";
            cin>>name;
        }
```



```
void displayStudentInfo() {
                               cout << "Roll number: " << roll_no << endl;</pre>
                               cout << "Name: " << name << endl;</pre>
                         }
    };
   class Test {
           int marks[5];
           public:
               void getTestMarks() {
                      cout << "Enter marks obtained in 5 subjects:\n";
                      for (int i = 0; i < 5; i++) {
                            cout << "Subject " << i+1 << ": ";
                            cin >> marks[i];
                      }
              void displayTestMarks() {
                      cout << "Marks obtained:\n";</pre>
                     for (int i = 0; i < 5; i++) {
                          cout << "Subject " << i+1 << ": " << marks[i] << endl;
                      }
              int getTotalMarks() {
                 int total = 0;
                 for (int i = 0; i < 5; i++) {
                      total += marks[i];
                }
              return total;
          float getPercentage() {
             return (getTotalMarks() / 5.0);
           }
       };
class Result : public Student, public Test {
```



```
public:
       void getResult() {
             getStudentInfo();
             getTestMarks();
      }
      void displayResult() {
           displayStudentInfo();
           displayTestMarks();
         cout << "Total marks: " << getTotalMarks() << endl;</pre>
         cout << "Percentage: " << getPercentage() << "\%" << endl; \\
    }
};
int main() {
         Result r;
         r.getResult();
         r.displayResult();
         return 0;
}
```



```
Enter roll number: 22
Enter name: Darshan
Enter marks obtained in 5 subjects:
Subject 1: 80
Subject 2: 78
Subject 3: 90
Subject 4: 95
Subject 5: 85
Roll number: 22
Name: Darshan
Marks obtained:
Subject 1: 80
Subject 2: 78
Subject 3: 90
Subject 4: 95
Subject 5: 85
Total marks: 428
Percentage: 85.6%
```

### Aim:

Write a C++ program to overload binary + operator.



```
real=0;
       imag=0;
     complex(int x,int y)
     {
       real=x;
       imag=y;
     }
     void disp()
       cout<<"\nReal Value= "<<real<<endl;</pre>
       cout<<"\nImag Value= "<<imag<<endl;</pre>
     }
     complex operator + (complex);
};
complex complex::operator +(complex c)
{
  complex tmp;
  tmp.real = this->real + c.real; //this is operator
  tmp.imag = this->imag + c.imag; //this is operator
  return tmp;
}
int main()
  complex c1(4,6),c2(7,9);
  complex c3;
  c3 = c1 + c2; //(c1 is calling object) (+ is userdefine operator)
  c1.disp();
  c2.disp();
```



```
c3.disp();
return 0;
}
```

```
Real Value= 4

Imag Value= 6

Real Value= 7

Imag Value= 9

Real Value= 11

Imag Value= 15
PS F:\C++\Overloading>
```

### **Practical - 12**

### Aim:

Create a base class called 'SHAPE' having two data members of type double, member function get\_data() to initialize base class data members, pure virtual member function display\_area() to compute and display the area of the geometrical object. Derive two specific classes 'TRIANGLE' and 'RECTANGLE' from the base class. Using these three classes design a program that will accept dimension of a triangle / rectangle interactively and display the area.

```
#include<iostream>
#include<stdlib.h>
using namespace std;
class shape
```



```
protected:
     double x,y;
 public:
     void getDataofTriangle() {cin>>x>>y;}
     void getDataofRectangle() {cin>>x>>y;}
     virtual float calculateArea()=0;
 };
class Triangle:public shape
  public:
  double calculateArea() {return 0.5*x*y;}
};
class rectangle:public shape
{
   public:
      double calculateArea() {return x*y;}
};
int main()
   system("cls");
   triangle t;
   rectangle r;
   cout<<"Enter height and base to calculate the area of Triangle: ";
   t.getDataofTriangle();
   cout<<"Area of triangle: "<<t.calculateArea()<<endl;</pre>
   cout<<endl<<"Enter length and width to calculate the area of rectangle: ";
   r.getDataofRectangle();
   cout<<"Area of rectangle: "<<r.calculateArea();</pre>
   return 0;
 }
```



```
Enter height and base to calculate the area of triangle: 5 8
Area of triangle: 20

Enter length and width to calculate the area of rectangle: 6 4
Area of rectangle: 24
PS F:\OJT Practicals>
```

#### Practical - 13

### Aim:

To study DDL-create and DML-insert commands. Create following Tablea Job (job\_id, job\_title, min\_sal, max\_sal)

### Code:

```
emp_no int,
emp_name varchar(30),
emp_sal decimal(8,2),
emp_comm decimal(6,1),
dept_no int
);
insert into employee(emp_no,emp_name,emp_sal,dept_no)
values (101,'Smith',800,20);
```

create table employee(



insert into employee(emp\_no,emp\_name,emp\_sal,emp\_comm,dept\_no) values (102,'Snehal',1600,300,25), (103,'Adama',1100,0,20);

insert into employee(emp\_no,emp\_name,emp\_sal,dept\_no) values (104,'Aman',3000,15);

insert into employee(emp\_no,emp\_name,emp\_sal,emp\_comm,dept\_no) values (105,'Anita',5000,50000,10), (106,'Sneha',2450,24500,10);

insert into employee(emp\_no,emp\_name,emp\_sal,dept\_no) values (107,'Anamika',2975,30);

	np_no		
er	np_name		
er	np_sal		
er	np_comm		
de	pt_no		

	emp_no	emp_name	emp_sal	emp_comm	dept_no
1	101	Smith	800.00	NULL	20
2	102	Snehal	1600.00	300.0	25
3	103	Adama	1100.00	0.0	20
4	104	Aman	3000.00	NULL	15
5	105	Anita	5000.00	50000.0	10
6	106	Sneha	2450.00	24500.0	10
7	107	Anamika	2975.00	NULL	30



# Aim:

write a query to create job, employee, deposit and borrow table.

```
For job table
create table job(
    job_id varchar(15),
    job_title varchar(30),
    min_sal int,
    max_sal int
);
For emolyee table
create table employee(
    emp_no int,
    emp_name varchar(30),
    emp_sal decimal(8,2),
    emp_comm decimal(6,1),
```



```
dept_no int
```

```
);
For deposit table
             create table Deposit(
                   a_no int identity(1,1),
                   cname varchar(50),
                   bname varchar(30),
                   amount Decimal(4,2),
                   a_date date
              );
For borrow table
            create table borrow(
                   loanno int,
                   cname varchar(25),
                   bname varchar(20),
                   amount decimal(6,2)
                                           );
```

jo	iob		
	job_id		
	job_title		
	min_sal		
	max_sal		

De	eposit	
	a_no	
	cname	
	bname	
	amount	
	a_date	

em	ployee
	emp_no
	emp_name
	emp_sal
	emp_comm
	dept_no

Ioanno		
cname		
bname		
amount	t	



#### Aim:

write query to insert values in table employee, job and deposit.

### Code:

# For employee table

insert into employee(emp\_no,emp\_name,emp\_sal,dept\_no) values (101,'Smith',800,20);

insert into employee(emp\_no,emp\_name,emp\_sal,emp\_comm,dept\_no) values (102,'Snehal',1600,300,25), (103,'Adama',1100,0,20);

insert into employee(emp\_no,emp\_name,emp\_sal,dept\_no) values (104,'Aman',3000,15);

insert into employee(emp\_no,emp\_name,emp\_sal,emp\_comm,dept\_no) values (105,'Anita',5000,50000,10), (106,'Sneha',2450,24500,10);

insert into employee(emp\_no,emp\_name,emp\_sal,dept\_no)



values (107, 'Anamika', 2975, 30);

# For job table

insert into job (job\_id,job\_title,min\_sal,max\_sal) values ('IT PROG','Programmer',4000,10000), ('MK MGR','Marketing manager',9000,15000), ('FI MGR','Finance manager',8200,12000), ('FI ACC','Accountant',4200,9000), ('LEC','Lecturer',6000,17000), ('COMP OP','Computer Operator',1500,3000);

# For deposit table

insert into Deposit(actno,cname,bname,amount,adate) values(101,'Anil','andheri',7000,'01-jan-06'), (102,'Sunil','virar',5000,'15-jul-06'), (103,'Jay','villeparle',6500,'12-mar-06'), (104,'Vijay','andheri',8000,'17-sep-06'), (105,'Keyur','dadar',7500,'19-nov-06'), (106,'Mayur','borivali',5500,'21-dec-06');

	emp_no	emp_name	emp_sal	emp_comm	dept_no
1	101	Smith	800.00	NULL	20
2	102	Snehal	1600.00	300.0	25
3	103	Adama	1100.00	0.0	20
4	104	Aman	3000.00	NULL	15
5	105	Anita	5000.00	50000.0	10
6	106	Sneha	2450.00	24500.0	10
7	107	Anamika	2975.00	NULL	30



	job_id	job_title	min_sal	max_sal
1	IT PROG	Programmer	4000.00	10000.00
2	MK MGR	Marketing manager	9000.00	15000.00
3	FI MGR	Finance manager	8200.00	12000.00
4	FI ACC	Accountant	4200.00	9000.00
5	LEC	Lecturer	6000.00	17000.00
6	COMP OP	Computer Operator	1500.00	3000.00

	actno	cname	bname	amount	adate
1	101	Anil	andheri	7000.00	2006-01-01
2	102	Sunil	virar	5000.00	2006-07-15
3	103	Jay	villeparle	6500.00	2006-03-12
4	104	Vijay	andheri	8000.00	2006-09-17
5	105	Keyur	dadar	7500.00	2006-11-19
6	106	Mayur	borivali	5500.00	2006-12-21

### Aim:

Write the SQL queries to provide constraints on given tables. Create A Database Sales and Write SQL Queries to create following tables with all constrains mentioned in image.

```
create table customers(
    customer_id int not null primary key identity(1,1),
    last_name varchar(50) not null,
    first_name varchar(50) not null,
    phone bigint not null,
    email varchar(50),
    street varchar(50),
```

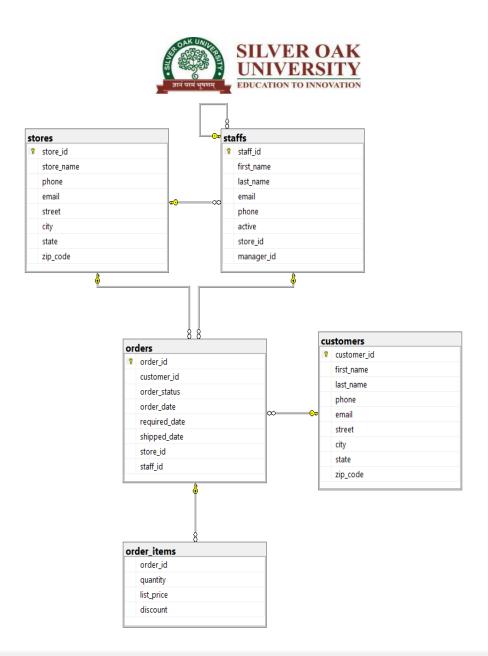


```
city varchar(50) not null,
      state varchar(50) not null,
     zip_code int
 );
create table staffs(
     staff_id int not null primary key identity(1,1),
     first_name varchar(50) not null,
      last_name varchar(50) not null,
      email varchar(50),
      phone bigint not null,
      active binary not null,
      store_id int foreign key references stores(store_id),
      manager_id int foreign key references staffs(staff_id)
);
create table stores(
      store_id int not null primary key identity(1,1),
     store_name varchar(50) not null,
     phone bigint not null,
     email varchar(50),
     street varchar(50),
     city varchar(50) not null,
     state varchar(50) not null,
     zip_code int
);
```



```
create table orders(
     order_id int not null primary key identity(1,1),
     customer_id int foreign key references customers(customer_id),
     order_status varchar(50) not null,
     order_date date not null,
     required_date date,
     shipped_date date not null,
      store_id int foreign key references stores(store_id),
      staff_id int foreign key references staffs(staff_id)
  );
  create table order_items(
        order_id int foreign key references orders(order_id),
        quantity int not null,
        list_price int not null,
        discount int
```

);



Practical - 17

#### Aim:

Write the SQL queries to perform various aggregate functions on table data.

- 1. List total deposit from deposit.
- 2. List total amount from andheri branch
- 3. Count total number of customers
- 4. Count total number of customer's cities.
- 5. Update the value dept no to 10 where second character of emp. name is 'm'.
- 6. Update the value of employee name whose employee number is 103.
- 7. Write a query to display the current date. Label the column Date
- 8. For each employee, display the employee number, salary, and salary



increased by 15% and expressed as a whole number. Label the column New Salary

9. Modify your previous query to add a column that subtracts the old salary from the new salary. Label the column Increment.

### Code:

- 1. select \*from Deposit;
- select sum(amount) from Deposit where bname='andheri';
- 3. select count(\*) from deposit;
- 4. select bname, count(\*) from deposit group by bname;
- 5. update employee

```
set dept_no=10 where emp_name like '_m%';
```

6. update employee

```
set emp_name='Pujan' where emp_no=103;
```

- 7. select GETDATE() as Date from employee;
- 8. alter table employee

```
add new_sal varchar(50);
update employee
set new_sal=emp_sal+(emp_sal*15/100);
```

alter table employee
 add increment varchar(50);

```
update employee
```

set increment=new\_sal-emp\_sal;



1     101     Anil     andheri     7000.00     2006-01-01       2     102     Sunil     virar     5000.00     2006-07-15       3     103     Jay     villeparle     6500.00     2006-03-12       4     104     Vijay     andheri     8000.00     2006-09-17       5     105     Keyur     dadar     7500.00     2006-11-19       6     106     Mayur     borivali     5500.00     2006-12-21       (No column name)       1     15000.00       (No column name)		actno	cname	bname	amount	adate
3 103 Jay villeparle 6500.00 2006-03-12 4 104 Vijay andheri 8000.00 2006-09-17 5 105 Keyur dadar 7500.00 2006-11-19 6 106 Mayur borivali 5500.00 2006-12-21  (No column name) 1 15000.00  (No column name)	1	101	Anil	andheri	7000.00	2006-01-01
4 104 Vijay andheri 8000.00 2006-09-17 5 105 Keyur dadar 7500.00 2006-11-19 6 106 Mayur borivali 5500.00 2006-12-21  (No column name) 1 15000.00  (No column name)	2	102	Sunil	virar	5000.00	2006-07-15
5 105 Keyur dadar 7500.00 2006-11-19 6 106 Mayur borivali 5500.00 2006-12-21 (No column name) 1 15000.00 (No column name)	3	103	Jay	villeparle	6500.00	2006-03-12
6 106 Mayur borivali 5500.00 2006-12-21  (No column name) 1 15000.00  (No column name)	4	104	Vijay	andheri	8000.00	2006-09-17
(No column name) 1 15000.00 (No column name)	5	105	Keyur	dadar	7500.00	2006-11-19
1 15000.00 (No column name)	6	106	Mayur	borivali	5500.00	2006-12-21
		(No column name)				
		(No col	umn nam	e)		

	bname	(No column name)
1	andheri	2
2	borivali	1
3	dadar	1
4	villepa	1
5	virar	1

	Date
1	2023-03-19 22:56:50.937
2	2023-03-19 22:56:50.937
3	2023-03-19 22:56:50.937
4	2023-03-19 22:56:50.937
5	2023-03-19 22:56:50.937
6	2023-03-19 22:56:50.937
7	2023-03-19 22:56:50.937



	emp_no	emp_name	emp_sal	emp_comm	dept_no	new_sal	increment
1	101	Smith	800.00	NULL	10	920.0000000000000	120.00
2	102	Snehal	1600.00	300.0	25	1840.00000000000000	240.00
3	103	Pujan	1100.00	0.0	20	1265.00000000000000	165.00
4	104	Aman	3000.00	NULL	10	3450.00000000000000	450.00
5	105	Anita	5000.00	50000.0	10	5750.00000000000000	750.00
6	106	Sneha	2450.00	24500.0	10	2817.50000000000000	367.50
7	107	Anamika	2975.00	NULL	30	3421.25000000000000	446.25

### Aim:

Write the SQL queries to perform numeric, date and String functions.

- 1. Retrieve all data from employee, jobs and deposit.
- 2. Give details of account no. and deposited rupees of customers having account opened between dates 01-01-06 and 25-07-06.
- 3. Display all jobs with minimum salary is greater than 4000.
- 4. Display name and salary of employee whose department no is 20. Give alias name to name of employee.
- 5. Display employee no,name and department details of those employee whose



department lies in (10,20)

- 6. Display all employee whose name start with 'A' and third character is 'a'.
- 7. Display name, number and salary of those employees whose name is 5 characters long and first three characters are 'Ani'.
- 8. Display the non-null values of employees and also employee name second charactershould be 'n' and string should be 5 character long.
- 9. Display the null values of employee and also employee name's third character should be 'a'.

#### Code:

1. select \*from employee;

select \*from job;

select \*from deposit;

2. select actno, amount from Deposit

where adate between '2006-01-01' and '2006-07-25';

3. select job\_id from job

where  $min_sal > 4000$ ;

4. select emp\_name as 'name of employee',emp\_sal from employee

where dept\_no=20;

5. select emp\_no,emp\_name,dept\_no from employee

where dept\_no between 10 and 20;

6. select emp\_name from employee

where emp\_name like 'A\_a%';

7. select emp\_name,emp\_no,emp\_sal from employee

where len(emp\_name)=5 and emp\_name like 'Ani%';

8. select emp\_name from employee

where emp\_comm is not null and emp\_name like '\_n%' and



len(emp\_name)=5;

9. select emp\_name from employee where emp\_comm is null and emp\_name like '\_\_a%';

# **Output:**

	emp_no	emp_name	emp_sal	emp_comm	dept_no
1	102	Snehal	1600.00	300.0	25
2	103	Adama	1100.00	0.0	20
3	104	Aman	3000.00	NULL	15
4	105	Anita	5000.00	50000.0	10
5	106	Sneha	2450.00	24500.0	10
6	107	Anamika	2975.00	NULL	30

	job_id	job_title	min_sal	max_sal
1	IT PROG	Programmer	4000.00	10000.00
2	MK MGR	Marketing manager	9000.00	15000.00
3	FIMGR	Finance manager	8200.00	12000.00
4	FLACC	Accountant	4200.00	9000.00
5	LEC	Lecturer	6000.00	17000.00
6	COMP OP	Computer Operator	1500.00	3000.00

	actno	cname	bname	amount	adate
1	101	Anil	andheri	7000.00	2006-01-01
2	102	Sunil	virar	5000.00	2006-07-15
3	103	Jay	villeparle	6500.00	2006-03-12
4	104	Vijay	andheri	8000.00	2006-09-17
5	105	Keyur	dadar	7500.00	2006-11-19
6	106	Mayur	borivali	5500.00	2006-12-21

	actno	amount	
1	101	7000.00	
2	102	5000.00	
3	103	6500.00	

	job_id
1	MK MGR
2	FIMGR
3	FLACC
4	LEC



	name of e	mplovee	em	p_sal
1	Adama			00.00
	omp po	omp par		dept no
4	emp_no	emp_nar	ne	dept_no
1	103			20
2	104	Aman		15
3	105	Anita		10
4	106	Sneha		10
	emn nam	ne.		
1	emp_nam Adama			
-				
2	Aman			
3	Anamika			
	emp_nam	ne emp_	no	emp_sal
1	Anita	105		5000.00
4	emp_nam	ic		
1	Anita			
2	Sneha			
	emp_nam	ne		
1	Aman			
2	Anamika			

#### Practical - 19

#### Aim:

Make a Resume using the HTML tags without CSS.

#### **Code:**

<html>

#### <head>

```
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```



```
<title>resume</title>
</head>
<body>
  <center><h1>RESUME</h1></center>
<center> <img src="C:\Users\ronak\Desktop\darshan.jpg"></img>
 <div class="one">
   <h2>Darshan Dhaduk</h2>
 </div></center>
 <h3><u>CONTACT</u></h3>
 <b>MOBILE : </b>7984211002
 <b>EMAIL : </b>dhadukdarshan98@gmail.com
 <h3><u>OBJECTIVE</u></h3>
 ul>
 Looking for a suitable job role in Software Engineering and
Development with ABC Inc. to utilize 2+ years of experience in technology
engineering, software design, client support and servicing and server
maintenance.
 <h3><u>EDUCATION</u></h3>
 COURSE
   BOARD
   YEAR
MARKS
 SSC
   GSEB
   2020
   86%
 HSC
   GSEB
   2022
   56%
```



```
<h3><u>SKILLS</u></h3>
 <h3>Technical Skills</h3>
 ul>
 C,C++
 HTML,CSS,JAVASCRIPT
 SQL
 VS STUDIO,WINDOWS
 <h3>Soft Skills</h3>
 <l
 ADAPTABILITY
 TEAM WORK
 <h3><u>LANGUAGES</u></h3>
 ul>
GUJARATI
 HINDI
 ENGLISH
 <h3><u>HOBBIES</u></h3>
ul>
 TRAVEL
 sports
<h3><u>DECLARATION</u></h3>
I hereby declare that the details and information given above are
complete and true to the best of my knowledge
</body>
</html>
```



#### RESUME



Darshan Dhaduk

#### CONTACT

MOBILE: 7984211002

EMAIL: dhadukdarshan98@gmail.com

#### OBJECTIVE

Looking for a suitable job role in Software Engineering and Development with ABC Inc. to utilize 2+ years of experience in technology engineering, software design, client support and servicing and server maintenance.

COURSE	BOARD	YEAR	MARKS
SSC	GSEB	2020	86%
HSC	GSEB	2022	56%

#### SKILLS

#### Technical Skills

- C,C++
   HTML,CSS,JAVASCRIPT
   SQL
   VS STUDIO,WINDOWS

ADAPTABILITY
 TEAM WORK

#### LANGUAGES

- HOBBIES
- TRAVEL
   sports

#### DECLARATION

 $I\,hereby\,declare\,that\,the\,details\,and\,information\,given\,above\,are\,complete\,and\,true\,to\,the\,best\,of\,my\,knowledge$ 

**Practical - 20** 



**Aim:**Create an HTML webpage that shows Poster Presentation using all Table Properties.

```
<!DOCTYPE html>
<html>
<head>
      <title>Movie Poster Presentation</title>
      <style>
             table {
                   border-collapse: collapse;
                    width: 100%;
             }
             td, th {
                    border: 1px solid black;
                   padding: 8px;
                   text-align: center;
             }
             th {
                    background-color: #f2f2f2;
                   font-weight: bold;
             tr:nth-child(even) {
                    background-color: #f2f2f2;
             }
             caption {
                   font-size: 1.2em;
                   font-weight: bold;
                   margin-bottom: 10px;
      </style>
</head>
<body>
      <caption>Movie Poster Presentation</caption>
```



```
<thead>
             Poster
                  Title
                  Release Year
                  Director
Actors
                  Genre
             </thead>
         ="250px" height="300px"
src="https://i.pinimg.com/originals/84/18/d7/8418d756cc9038b87815a4f2d4f2a16f.jp
g" alt="Movie Poster">
                  The Dark Knight
                  2008
                  Christopher Nolan
                  Christian Bale, Heath Ledger, Aaron Eckhart
                  Action, Crime, Drama
             ="250px" height="300px"
src="https://w0.peakpx.com/wallpaper/1/639/HD-wallpaper-forrest-gump-love-
movie.jpg" alt="Movie Poster">
                  Forrest Gump
                  1994
                  Robert Zemeckis
                  Tom Hanks, Robin Wright, Gary Sinise
                  Drama, Romance
             ="250px" height="300px"
src="https://wallpaperaccess.com/full/2235018.jpg" alt="Movie Poster">
                  KGF2
                  2022
                  Prashanth Neel
                  Yash, Srinidhi Shetty, Sanjay Dutt, Raveena Tandon,
Prakash Raj, Ramachandra Raju
                  Action, Drama
```



</body> </html>

# **Output:**

#### Movie Poster Presentation

Poster	Title	Release Year	Director	Actors	Genre
	The Dark Knight	2008	Christopher Nolan	Christian Bale, Heath Ledger, Aaron Eckhart	Action, Crime, Drama
Tom Hanks is Forrest Gump	Forrest Gump	1994	Robert Zemeckis	Tom Hanks, Robin Wright, Gary Sinise	Drama, Romance
(Constitution of the second of	KGF2	2022	Prashanth Neel	Yash, Srinidhi Shetty, Sanjay Dutt, Raveena Tandon, Prakash Raj, Ramachandra Raju	Action, Drama

# **Practical-20**

Aim: Create an HTML page table and form.



```
<!DOCTYPE html>
<html>
<head>
      <title>Table and Form Example</title>
      <style>
             table {
                    border-collapse: collapse;
                    width: 100%;
             td, th {
                    border: 1px solid black;
                    padding: 8px;
             }
             th {
                    background-color: #f2f2f2;
                    font-weight: bold;
             tr:nth-child(even) {
                    background-color: #f2f2f2;
             form {
                    margin-top: 20px;
             label {
                    display: block;
                    margin-bottom: 8px;
             input[type="text"], select {
                    padding: 6px 10px;
                    border: 1px solid #ccc;
                    border-radius: 4px;
                    box-sizing: border-box;
                    margin-bottom: 8px;
                    width: 100%;
             input[type="submit"] {
                    background-color: #4CAF50;
                    color: white;
padding: 12px 20px;
                    border: none;
```

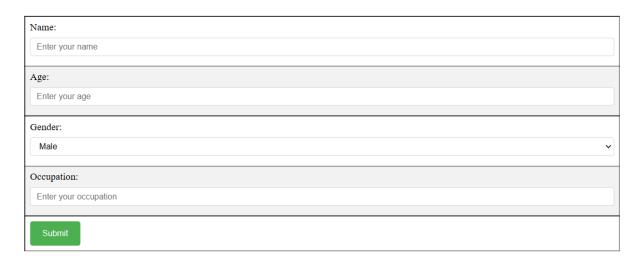


```
border-radius: 4px;
                cursor: pointer;
          input[type="submit"]:hover {
                background-color: #45a049;
     </style>
</head>
<body>
     <form>
   <label for="name">Name:</label>
         <input type="text" id="name" name="name" placeholder="Enter your</pre>
name">
       <label for="age">Age:</label>
         <input type="text" id="age" name="age" placeholder="Enter your age">
       <label for="gender">Gender:</label>
         <select id="gender" name="gender">
       <option value="male">Male</option>
       <option value="female">Female</option>
       <option value="other">Other</option>
      </select>
       <label for="occupation">Occupation:</label>
         <input type="text" id="occupation" name="occupation"
placeholder="Enter your occupation">
       <input type="submit" value="Submit">
     </form>
</body>
```



</html>

## **Output:**



#### **Practical-21**

**Aim:**Create Registration form and do proper validation with HTML 5 inbuilt functionality. (Don't use JavaScript).



```
!DOCTYPE html>
<html>
<head>
       <title>Registration Form</title>
       <style>
              label {
                     display: block;
                     margin-bottom: 8px;
              input[type="text"], input[type="email"], input[type="password"] {
                     padding: 6px 10px;
                     border: 1px solid #ccc;
                     border-radius: 4px;
                     box-sizing: border-box;
                     margin-bottom: 8px;
                     width: 100%;
              input[type="submit"] {
                     background-color: #4CAF50;
                     color: white;
                     padding: 12px 20px;
                     border: none;
                     border-radius: 4px;
                     cursor: pointer;
       </style>
</head>
<body>
       <h1>Registration Form</h1>
       <form>
              <label for="name">Name:</label>
              <input type="text" id="name" name="name" placeholder="Enter your name"</pre>
required>
              <label for="email">Email:</label>
              <input type="email" id="email" name="email" placeholder="Enter your
email" required>
              <label for="password">Password:</label>
              <input type="password" id="password" name="password" placeholder="Enter
your password" pattern="(?=.*\d)(?=.*[a-z])(?=.*[A-Z]).{8,}" required>
              <small>Password must contain at least one number, one lowercase letter, one
uppercase letter, and be at least 8 characters long.</small>
```



#### **Output:**

</html>

#### **Registration Form**

Name:
Enter your name
Email:
Enter your email
Password:
Enter your password
Password must contain at least one number, one lowercase letter, one uppercase letter, and be at least 8 characters long. Confirm Password:
Confirm your password
Register

#### **Practical-22**

Aim: Make a Resume using the HTML tags with CSS.



<html lang="en">

<head>

```
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<link rel="stylesheet" href="file.css">
<div class="full">
   <div class="left">
               style="width:100px;height:100px;">
       <div class="Contact">
           <h2>Contact</h2>
           <b>Email id:</b>dhadukdarshan98@gmail.com
           <b>Mobile no :</b>7984211002
       <div class="Skills">
           <h2>Skills</h2>
               <b>Programming Languages :
                       C++, HTML, css, c</b>
```



```
<h2>Language</h2>
      English
      Hindi
      Gujarati
<div class="Hobbies">
  <h2>Hobbies</h2>
      Travelling
      Sports
<div class="name">
   <h1>Darshan Dhaduk</h1>
  Student
<div class="Personal details">
   <h2>Personal details</h2>
```



```
<b>DOB:</b>22 march 2004
<h2>Education</h2>
   Qualification   
   Board       
   >percentage
   SSC
   GSEB
   2020
   86%
   HSC
   GSEB
   2022
   56%
```



```
</div>
              <h2>Area Of Interests</h2>
                   Web Devloper
                 Cyber Security
                 Softwear Engineering
   margin: 0;
   padding: 0;
body {
   background-color: rgb(253, 254, 255);
   display: flex;
   justify-content: center;
   align-items: center;
```



```
width: 50%;
   max-width: 1000px;
   min-height: 100px;
   background-color: rgb(245, 239, 231);
   margin: 0px;
   display: grid;
   grid-template-columns: 2fr 4fr;
   position: initial;
   background-color: rgb(126, 219, 231);
   padding: 20px;
   position: initial;
   background-color: rgb(162, 202, 206);
   padding: 20px;
.image, .Contact, .Skills, .Language, .Hobbies, .title,
.Experience, .Education, .project {
   margin-bottom: 30px;
   background-color: rgb(4, 96, 150);
```





# Contact Email id:dhadukdarshan98@gmail.com Mobile no:7984211002

#### **Skills**

• Programming Languages : C++,HTML,css,c

# Language

- English
- Hindi
- Gujarati

#### **Hobbies**

- Travelling
- Sports

# **Darshan Dhaduk**

Student

#### Personal details

DOB:22 march 2004 Gender:Male

#### **Education**

Qualification	Board	Passing year	percentage
SSC	GSEB	2020	86%
HSC	GSEB	2022	56%

## **Area Of Interests**

- Web Devloper
- Cyber Security
- Softwear Engineering



#### **Practical-23**

Aim: Create an HTML Page containing the following Gray Layout using CSS.

#### Code:

1.

```
<!DOCTYPE html>
<html lang="en">
 <head>
  <meta charset="UTF-8"/>
  <meta http-equiv="X-UA-Compatible" content="IE=edge" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <title>Document</title>
  <style type="text/css">
   * {
    font-size: 22px;
    font-weight: bold;
   }
   #r1 {
    background-color: gray;
    height: 50px;
    padding-top: 20px;
    width: 98%;
    padding-left: 2%;
    margin-bottom: 10px;
   #r2,
   #r5 {
    background-color: gray;
    height: 33px;
    padding-top: 7px;
    /* width: 100%; */
```



```
padding-left: 2%;
    text-align: center;
    margin-bottom: 10px;
   #r3 {
    background-color: gray;
    height: 90px;
    width: 100%;
    padding-top: 60px;
    text-align: center;
    margin-bottom: 10px;
 #r4 {
    height: 600px;
    width: 100%;
    margin-bottom: 10px;
   #r4c1 {
    width: 28%;
    margin-right: 2%;
   #r4c2 {
    width: 70%;
   #r4 div {
    float: left;
    height: 320px;
    padding-top: 280px;
    text-align: center;
    background-color: gray;
  </style>
 </head>
 <body>
  <div>
   <div id="r1">Logo</div>
   <div id="r2">Navigation</div>
   <div id="r3">Header/Banner</div>
   <div id="r4">
    <div id="r4c1">Side bar</div>
    <div id="r4c2">Body Area</div>
   </div>
   <div id="r5">Footer</div>
  </div>
 </body>
</html>
```



#### 2.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
  <style type="text/css">
    *{
       font-size: 22px;
       font-weight: bold;
}
    #r1{
       background-color: gray;
       height: 50px;
       padding-top: 20px;
       width: 98%;
       padding-left: 2%;
       margin-bottom: 10px;
    #r2,#r5{
       background-color: gray;
       height: 33px;
       padding-top: 7px;
       /* width: 100%; */
       padding-left: 2%;
       text-align: center;
       margin-bottom: 10px;
    #r3{
       background-color: gray;
       height: 90px;
       width: 100%;
       padding-top: 60px;
       text-align: center;
```



```
margin-bottom: 10px;
    #r4{
       height: 600px;
       width: 100%;
       margin-bottom: 10px;
    #r4c1{
       width: 32%;
       margin-right: 2%;
    #r4c2{
       width: 32%;
       margin-right: 2%;
    #r4c3{
       width: 32%;
    #r4 div{
       float: left;
       height: 320px;
       padding-top: 280px;
       text-align: center;
       background-color: gray;
 }
  </style>
</head>
<body>
  <div>
    <div id="r1">
         Logo
    </div>
    <div id="r2">
         Navigation
    </div>
    <div id="r3">
       Header/Banner
    </div>
    <div id="r4">
       <div id="r4c1">
        box-1
       </div>
       <div id="r4c2">
         box-2
       </div>
       <div id="r4c3">
       box-3
       </div>
    </div>
    <div id="r5">
```



```
Footer
</div>
</div>
</body>
</html>
```

#### **3.**

```
<html>
<head>
  <title>Demo Layout 3</title>
  <style type="text/css">
    * {
       font-size: 22px;
       font-weight: bold;
    #R1 {
       background-color: gray;
       height: 50px;
      padding-top: 20px
width: 98%;
      padding-left: 2%;
       margin-bottom: 10px;
    }
    #R5 {
       background-color: gray;
       height: 33px;
       width: 100%;
      padding-top: 7px;
       text-align: center;
      margin-bottom: 10px;
       margin-top: 1%;
    }
    table {
       width: 100%;
       height: 600px;
       width: 28%;
    }
```



```
.b {
     background-color: gray;
     height: 100px;
     text-align: center;
   }
   .bl {
     height: 10px;
   .ba {
     background-color: gray;
     height: 490px;
     text-align: center;
   }
 </style>
</head>
<body>
 <div>
   <div id="R1">
     Logo
   </div>
   Side Bar Navigation
      Header/Banner
      >
        <div class="bl"></div>
      Body Area
      <div id="R5">
     Footer
   </div>
 </div>
</body>
```



</html>

```
4.
```

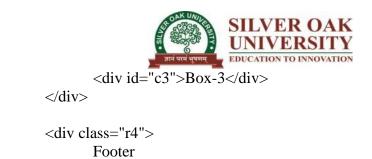
```
<html>
<head>
       <title>Demo Layout 1</title>
       <style type="text/css">
              * {
                     font-size: 22px;
                     font-weight: bold;
              }
              #R1 {
                     background-color: gray;
                     height: 50px;
                     padding-top: 20px;
                     width: 98%;
                     padding-left: 2%;
                     margin-bottom: 10px;
#R2 {
                     width: 100%;
                     margin-bottom: 10px;
                     height: 620px;
              }
              #R2 div {
                     float: left;
                     margin-bottom: 1%;
              }
              #R5 {
                     background-color: gray;
                     height: 33px;
                     width: 100%;
                     padding-top: 7px;
                     text-align: center;
                     margin-bottom: 10px;
```



```
}
#R3 {
       background-color: gray;
       height: 90px;
       width: 100%;
       padding-top: 60px;
       text-align: center;
}
.B1,.B2,.B3,.B5,.B6,.B7,.B9,.B10,.B11,.B13,.B14,.B15 {
       background-color: grey;
       height: 150px;
       width: calc(25% - 1%);
       margin-right: 1%;
}
.B4,.B8,.B12,.B16 {
       background-color: grey;
       height: 150px;
       width: 25%;
}
#R3 {
       width: 100%;
       background-color: white;
       height: 222px;
       padding-top: 0px;
       margin-top: 2%;
}
#R3 div {
       float: left;
       margin-bottom: 0%;
}
#c1 {
       background-color: grey;
       height: 220px;
       width: 32%;
       margin-right: 1%;
}
#c2 {
```



```
background-color: grey;
                    height: 220px;
                     width: 34%;
                    margin-right: 1%;
              }
             #c3 {
                     background-color: grey;
                    height: 220px;
                     width: 32%;
              }
             .r4 {
                    height: 50px;
                    background-color: grey;
                    margin-top: 1%;
                     text-align: center;
                    padding-top: 20px;
       </style>
</head>
<body>
       <div>
              <div id="R1">
                    Logo
              </div>
              <div id="R2">
                     <div class="B1"></div>
                     <div class="B2"></div>
                     <div class="B3"></div>
                     <div class="B4"></div>
                     <div class="B5"></div>
                     <div class="B6"></div>
                     <div class="B7"></div>
                     <div class="B8"></div>
                     <div class="B9"></div>
                     <div class="B10"></div>
                     <div class="B11"></div>
                     <div class="B12"></div>
                     <div class="B13"></div>
                     <div class="B14"></div>
                     <div class="B15"></div>
                     <div class="B16"></div>
              </div>
              <div id="R3">
                     <div id="c1">Box-1</div>
                     <div id="c2">Box-2</div>
```



</body>

</div>

</html>

# **Output:**

Logo	
	Navigation
	Header/Banner
Side bar	Body Area
	Footer



Logo					
	Navigation				
	Header/Banner				
box-1	box-2	box-3			
	Footer				



Logo	
	Header/Banner
Side Bar Navigation	Body Area
	Footer



Logo					
Box-1		Вс	ox-2		Box-3
Footer					



#### **Practical-24**

Aim: Demonstrate JavaScript Form Validation with proper examples.

```
<!DOCTYPE html>
<html>
<head>
  <title>Table and Form Example</title>
  <style>
    .container{
       height: 100vh;
       padding: 6px 10px;
       display: flex;
       justify-content: center;
       align-items: center;
    form {
       margin-top: 20px;
     }
    label {
       display: block;
       margin-bottom: 8px;
     }
    input[type="text"],
    select {
       padding: 6px 10px;
       border: 1px solid #ccc;
       border-radius: 4px;
       box-sizing: border-box;
       margin-bottom: 8px;
       width: 100%;
    input[type="password"],
    select {
       padding: 6px 10px;
       border: 1px solid #ccc;
       border-radius: 4px;
       box-sizing: border-box;
       margin-bottom: 8px;
```



```
width: 100%;
     }
    input[type="submit"] {
       background-color: #4CAF50;
       color: white;
       padding: 12px 20px;
       border: none;
       border-radius: 4px;
       cursor: pointer;
     }
    input[type="submit"]:hover {
       background-color: #45a049;
     }
  </style>
</head>
<body>
  <script>
    function verifyPassword() {
       var pw = document.getElementById("pswd").value;
       if (pw == "") {
         document.getElementById("message").innerHTML =
            "**Fill the password please!";
         return false;
       }
       if (pw.length < 8) {
         document.getElementById("message").innerHTML =
            "**Password length must be atleast 8 characters";
         return false;
       }
       if (pw.length > 15) {
         document.getElementById("message").innerHTML =
            "**Password length must not exceed 15 characters";
         return false;
       } else {
         alert("Password is correct");
       if (pw.charAt(0) != pw.charAt(0).toUppercase()) {
         alert("First letter must be Uppercase");
         return false;
       const specialchars = /['!@#$%^&*()_+\-=\[]{};':''\],.<>/?~]/;
       if (!specialchars.test(pw)) {
         document.getElementById("message").innerHTML =
"**include Atleat one special character";
         return false:
```



```
}
</script>

<div class="container">
<form onsubmit="return verifyPassword()">
<label for="name">Name:</label>
<input type="text" id="name" name="name" placeholder="Enter your name">
<label for="occupation">Password:</label>
<input type="password" id="pswd" name="password" placeholder="Enter your password" required>
<span id="message" style="color: rgb(255, 0, 0);"></span>
<br/><br/><input type="submit" value="Submit">
</form>
</div>
</form>
</div>
</html>
```

Name:	
Hardik	
Password:	
•••••	
Submit	

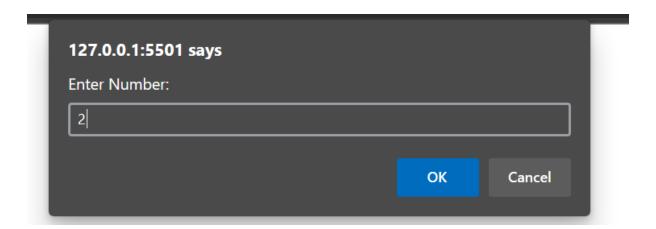


#### **Practical-25**

**Aim:**Write a javascript to check if the number is even or odd.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
</head>
<body>
  <script>
    function check(a) {
      const ans = Number(a);
      if (ans \% 2 == 0) {
         return 1;
      else {
         return 0;
    inp = prompt("Enter Number: ");
    temp = check(inp);
    if (temp)
       document.write("Even Number");
    else
      document.write("Odd number");
  </script>
</body>
</html>
```







#### **Practical-26**

Aim: Create a page and access the Location API.

```
<!DOCTYPE html>
<html>
<body>
  Click the button to get your coordinates.
  <button onclick="getLocation()">Try It</button>
  <script>
    var x = document.getElementById("demo");
    function getLocation() {
      if (navigator.geolocation) {
         navigator.geolocation.getCurrentPosition(showPosition);
         x.innerHTML = "Geolocation is not supported by this browser.";
    function showPosition(position) {
      x.innerHTML = "Latitude: " + position.coords.latitude +
         "<br/>br>Longitude: " + position.coords.longitude;
  </script>
</body>
</html>
```



Click the button to get your coordinates.

Try It

Latitude: 23.0302 Longitude: 72.5772



Aim: Create a simple XMLHTTPRequest, and retrieve the data from the text file.

```
<!DOCTYPE html>
<html>
<body>
  <div id="demo">
    <h2>Let AJAX change this text</h2>
  </div>
  <button type="button" onclick="loadDoc()">Change Content</button>
  <script>
    function loadDoc() {
       var xhttp = new XMLHttpRequest();
       xhttp.onreadystatechange = function () {
         if (xhttp.readyState == 4 && xhttp.status == 200) {
           document.getElementById("demo").innerHTML = xhttp.responseText;
         }
      xhttp.open("GET", "ajax_info.txt", true);
       xhttp.send();
  </script>
</body>
</html>
```



# The XMLHttpRequest Object

Change Content

# **AJAX**

AJAX is not a programming language.

AJAX is a technique for accessing web servers from a web page.

AJAX stands for Asynchronous JavaScript And XML.