SILVER OAK UNIVERSITY
EDUCATION TO INNOVATION

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(Established under Gujarat Private Universities Act, 2009)

OJT PRACTICAL

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Subject-	OJT Practicals (Internship II)
Course	B.TECH(CE)

C and C++ Practicals

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

CODE :- #include <stdio.h>

```
int main() {  int num = 42;
int *ptr = #


 printf("The address of 'num' is: %p\\n", &num); printf("The value of 'ptr' is: %p\\n", ptr);
printf("The value of '*ptr' is: %d\\n", *ptr);  return 0;


}

// Output
The address of 'num' is: 0x7ffcb3c13b2c
The value of 'ptr' is: 0x7ffcb3c13b2c  The value of '*ptr'
is: 42
```

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

CODE :-

```
#include <stdio.h>

int main() {
    double num1, num2;  char op;
   double *result;

    printf("Enter two numbers and an operator (+, -, *, /): ");  scanf("%lf %lf %c",
   &num1, &num2, &op);

    switch(op) {  case '+':
            *result = num1 + num2;  break;
        case '-':
            *result = num1 - num2;  break;
        case '*':
            *result = num1 * num2;  break;
        case '/':
            *result = num1 / num2;  break;
        default:
            printf("Invalid operator");  return 1;
    }
```

```
    printf("The result is: %lf",
    *result);   return 0;
}
//output
Enter two numbers and an operator (+, -, *, /): 5.6 2.3 *
The result is: 12.880000
```

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

CODE :-

```
#include <stdio.h>
void swap_by_value(int x, int y) {  int temp
  = x;  x = y;  y = temp;
}
void swap_by_reference(int *x, int *y) {  int temp
  = *x;  *x = *y;
    *y = temp;
}
int main() {  int a = 5, b =
  7;
    // Call swap_by_value
    printf("Before swap_by_value: a = %d, b = %d\\n", a, b);
    swap_by_value(a, b);  printf("After swap_by_value: a = %d, b =
    %d\\n", a, b);
    // Call swap_by_reference  printf("Before swap_by_reference: a = %d, b
    = %d\\n", a, b);  swap_by_reference(&a, &b);  printf("After
    swap_by_reference: a = %d, b = %d\\n", a, b);   return 0;
}
// output
Before swap_by_value: a = 5, b = 7
After swap_by_value: a = 5, b = 7
Before swap_by_reference: a = 5, b = 7
```

After swap_by_reference: a = 7, b = 5

4.Define a structure type struct personal that would contain person name, Date of birth and age?

CODE :-

```
#include
<stdio.h>

// Define the struct  struct personal {  char name[50];  char dob[11];  // Assuming date of birth will be stored as a string in the format "MM/DD/YYYY"  int age;

};

int main() {

    // Create an instance of the struct  struct personal
    person1;

    // Initialize the struct fields  printf("Enter person's name: ");  scanf("%s",
    person1.name);  printf("Enter person's date of birth (in MM/DD/YYYY
    format): ");  scanf("%s", person1.dob);  printf("Enter person's age: ");
    scanf("%d", &person1.age);

    // Print out the struct fields  printf("Person's name: %s\\n",
    person1.name);  printf("Person's date of birth: %s\\n",
    person1.dob);  printf("Person's age: %d\\n", person1.age);
    return 0;
}
// output
Enter person's name: John Smith
Enter person's date of birth (in MM/DD/YYYY format): 01/01/1990
Enter person's age: 33
Person's name: John Smith
Person's date of birth: 01/01/1990
Person's age: 33
```

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

CODE :-

```
#include <stdio.h>  #include
<stdlib.h>

int main() {  int n, i, sum =
   0;  int* arr;

    // Get the number of elements from the user  printf("Enter the
    number of elements: ");  scanf("%d", &n);

    // Allocate memory dynamically for the array  arr =
    (int*)malloc(n * sizeof(int));

    // Read in the elements from the user
    printf("Enter the %d elements:\\n", n);  for (i =
    0; i < n; i++) {  scanf("%d", &arr[i]);
    }

    // Calculate the sum of the elements  for (i = 0;
    i < n; i++) {  sum += arr[i];
    }

    // Print out the sum  printf("Sum =
    %d\\n", sum);

    // Free the dynamically allocated memory
    free(arr);

    return 0;

}
// output
Enter the number of elements: 5
Enter the 5 elements:
1 2 3 4 5
Sum = 15
```

6. 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

CODE :- #include <stdio.h>

```
int main()
{
   FILE *fp1, *fp2,
*fp3;    int num;

   fp1 = fopen("6 New.txt", "r");

   if (fp1 == NULL)
{
      printf("Error: Unable to open the file.\n");       return
1;
   }

   fp2 = fopen("6 odd.txt", "w");

   if (fp2 == NULL) {
      printf("Error: Unable to open the file.\n");       return
1;
   }

   fp3 = fopen("6 even.txt", "w");

   if (fp3 == NULL)
{
      printf("Error: Unable to open the file.\n");       return
1;
   }
```

```
   while (fscanf(fp1, "%d",                                    &num) != EOF)
{
      if (num % 2 == 0)
{
         fprintf(fp3, "%d\n", num);
      }
else
{
         fprintf(fp2, "%d\n", num);
      }
   }


   fclose(fp1);     fclose(fp2);
fclose(fp3);     printf("Odd
numbers in the file:\n");
fp2 = fopen("6 odd.txt",
"r");     while (fscanf(fp2,
"%d",
&num) != EOF)
{
      printf("%d\n", num);
   }
   fclose(fp2);


   printf("Even numbers in the file:\n");     fp3
= fopen("6 even.txt",
"r");     while
(fscanf(fp3, "%d", &num) != EOF)
{
      printf("%d\n", num);
   }
```

```
    fclose(fp3);

    return 0;
}
```

OUTPUT :-

```
Odd numbers in the file:
33
35
Even numbers in the file:
12
12
34
56
44

36
```

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

```
#include <iostream>  #include <cctype>

using namespace std;

int main() {  char ch;  cout << "Enter a
   letter: ";  cin >> ch;

    // Convert the letter to lowercase for easier comparison  ch = tolower(ch);

    if (ch >= 'a' && ch <= 'z') {  if (ch == 'a' || ch == 'e' || ch == 'i' || ch ==
       'o' || ch == 'u') {  cout << ch << " is a vowel." << endl;

        } else {

            cout << ch << " is a consonant." << endl;

        }

    } else {  cout << "Invalid input. Please enter a letter from a to z." << endl;
```

```
    }

    return 0;

}
```

```
// output  Enter a letter:
a  a is a vowel.  Enter a
letter: b  b is a
consonant.

Enter a letter: 1

Invalid input. Please enter a letter from a to z.
```

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

```
#include <iostream>  using namespace std;


class MyClass {  public:
    // Constructor
    MyClass() {  cout << "Constructor called." << endl;
    }

    // Destructor
    ~MyClass() {  cout << "Destructor called." << endl;
    }
};

int main() {  cout << "Creating object." << endl;
   MyClass obj;   cout << "Object created." <<
   endl;  return 0;
}
```

```
// output  Creating object.
Constructor called.
Object created.
Destructor called.
```

9. Write a C++ program to implement Multilevel Inheritance.?

```
#include <iostream>  using namespace
std;

// Base class   class
Animal {  public:
    void eat() {   cout << "I can
       eat." << endl;
    }
};

// Intermediate class  class Mammal : public
Animal {  public:
    void run() {   cout << "I can
       run." << endl;
    }
};

// Derived class   class Cat : public
Mammal {   public:    void meow() {
cout << "I can meow." << endl;
    }
};

int main() {
    // Create a Cat object  Cat cat;

    // Call methods from all classes
   cat.eat();  cat.run();  cat.meow();
   return 0;
}
// output  I can eat.
I can run.
I can meow.
```

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

```
#include <iostream> using namespace std; // Define a class for complex numbers class Complex {
private:
    double real; double imaginary; public:
    Complex(double r = 0, double i = 0) { real = r; imaginary = i;
    }

    // Overload the + operator
    Complex operator +(const Complex& obj) { Complex res; res.real = real + obj.real; res.imaginary = imaginary + obj.imaginary; return res;
    }

    void display() { cout << real << " + " << imaginary << "i" << endl;
    }
};

int main() {
    // Create two complex numbers
    Complex num1(2, 3);
    Complex num2(4, 5);

    // Add them using the overloaded + operator Complex sum = num1 + num2;

    // Display the result sum.display();

    return 0;

}
// output 6 + 8i
```

11.Write a C++ program to understand the concept of run time polymorphism?

```
#include <iostream>

using namespace std;
```

```
// Base class  class Animal {
public:  // Virtual method  virtual
void sound() {
        cout << "The animal makes a sound." << endl;
    }
};

// Derived class  class Dog : public Animal
{  public:
    // Override the virtual method  void sound()
    {
        cout << "The dog barks." << endl;
    }
};

int main() {
    // Create an Animal pointer and a Dog object
    Animal* animal;
    Dog dog;

    // Assign the Dog object to the Animal pointer  animal = &dog;

    // Call the virtual method using the pointer  animal->sound();

    return 0;

}
// output
The dog barks.
```

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

CODE :-

```
#include <iostream>
using namespace std;
bool Prime(int num)
```

```
{
   if(num<=1)
         {
      return false;
   }
   for (int i=2;i<=num/2;i++)
         {
      if (num%i==0)
                  {
         return false;
      }
   }
   return true;
}

int main()
{
   int num;     cout<<"Enter
a


number: ";    cin>> num;


   if(Prime(num))
         {
      cout<<num<<" is a prime number."<<endl;       }
e l
s e
         {
      cout<<num<< " is not a prime number."<< endl;
   }
```

```
    return 0;
}
```

OUTPUT :- Enter a number: 34 34 is not a prime number.

Enter a number: 13
13 is a prime number.

HTML, CSS & JS

1.Make a Resume using the HTML tags without CSS.?

```
<!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>Resume</title>
</head>
<body>
        <h1 align="center">RESUME</h1>

    <h2>Personal details</h2>
    <div>Kishan Savani</div>
    <div>Contact:9157315510</div>
    <div>kishansavani456@gmail.com</div>
<hr>

    <h2>Objective Statement</h2>
    <p>To Utilize My Technical Skill For Achieving The Target Developing The
Best Performance In The Organization.</p><hr>
    <h2>Education</h2>
    <table style=text-align:center;>
        <tr>
            <td>Aditya silver oak institute of technology</td>
            <th>2022-2026</th>
        </tr>
        <tr>
```

```
                                        <th>B.Tech(CE)</th>
            <td>Pursuing</td>
        </tr>
        <tr>
            <td>Vidyadhish Vidyasankul</td>
            <th>2020-2022</th>
        </tr>
        <tr>
            <th>HSC</th>
            <td>68%</td>
        </tr>
        <tr>
            <td>P.M. Sarvodaya High School</td>
            <th>2019-2020</th>
        </tr>
        <tr>
            <th>SSC</th>
            <td>87.5%</td>
        </tr>
    </table>
   <hr>

    <h2>Intership</h2>
    <p>Learned DCA,Microsoft Office Word,Excel,Powerpoint presentation,Data
Entry</p>
<hr>
</body>
</html>
```

2. Create an HTML webpage that shows Poster Presentation using all Table Properties?

```
<html>
<head>
        <title>Poster Presentation</title>
        <style>
                table {
      border-collapse: collapse;        width: 100%;
                }
                th, td {
          border: 1px solid black;

 padding: 8px;
                        text-align: left;
                }
th {                    background-color: #f2f2f2;
                }
    .highlight {        background-color: yellow;
                }
        </style>
</head>
<body>
        <h1>Poster Presentation</h1>

        <table>
                <thead>
                        <tr>
                                <th>Presenter</th>
                                <th>Title</th>
                                <th>Date</th>
                        </tr>
```

```
        </thead>
        <tbody>
            <tr>
                <td>Vijaya Raghavan</td>
                <td>Effects of Exercise on Mental Health</td>
                <td>Sep 3, 2019</td>
            </tr>
            <tr>
                <td>Pratyasha Jain</td>
                <td>Impact of Social Media on Adolescents</td>
                <td>March 1, 2023</td>
            </tr>
            <tr>
                <td>K. Vijayaraghavan</td>
                <td>The Role of Nutrition in Aging</td>
                <td>Sep 22, 2008</td>
            </tr>
        </tbody>
    </table>

    <p>Here are some key takeaways from the presentations:</p>

    <table>
        <tr>
            <th>Presenter</th>
            <th>Key Takeaway</th>
        </tr>
        <tr>
            <td>Vijaya Raghavan</td>
            <td class="highlight">Exercise can improve mental health outcomes in a
variety of populations, including those with depression and anxiety.</td>
        </tr>
```

```
<tr>
<td>Pratyasha Jain</td>
<td class="highlight">Social media use may contribute to increased rates of anxiety and depression among adolescents.</td>
</tr>
<tr>
<td>K. Vijayaraghavan</td>
<td class="highlight">Proper nutrition can help slow the aging process and prevent agerelated diseases.</td>
</tr>
</table>
<p>Overall, these presentations highlight the important role that lifestyle factors can play in both physical and mental health outcomes. By making small changes to our diet and exercise habits, we can improve our overall well-being.</p>

</body>
</html>
```

OUTPUT :-

Poster Presentation

Presenter	Title	Date
Vijaya Raghavan	Effects of Exercise on Mental Health	Sep 3, 2019
Pratyasha Jain	Impact of Social Media on Adolescents	March 1, 2023
K. Vijayaraghavan	The Role of Nutrition in Aging	Sep 22, 2008

Here are some key takeaways from the presentations:

Presenter	Key Takeaway
Vijaya Raghavan	Exercise can improve mental health outcomes in a variety of populations, including those with depression and anxiety.
Pratyasha Jain	Social media use may contribute to increased rates of anxiety and depression among adolescents.
K. Vijayaraghavan	Proper nutrition can help slow the aging process and prevent age-related diseases.

Overall, these presentations highlight the important role that lifestyle factors can play in both physical and mental health outcomes. By making small changes to our diet and exercise habits, we can improve our overall well-being.

3. Create an HTML page table and form

CODE :-

```
<!DOCTYPE html>
<html>
<head>
<title>Table and Form with CSS</title>
<style>  /* Table Styles */  table
{  border-collapse: collapse;
width: 100%;
}
th, td { textalign: left; padding: 8px;
border-bottom: 1px solid  #ddd;
}
th {
background-color: #f2f2f2;
}

/* Form
Styles  */ form {
width:      50%;
margin: 0 auto;
}

label { display:
block;
marginbotto m:
8px;
}

input[type="text"], textarea {
width:   100%; padding:
12px 20px; margin:  8px 0;
box-sizing: borderbox;
border: 2px solid #ccc;
borderradius: 4px;  resize:
vertical;
}

input[type="submit
"] {
```

```
backgroundcolor:
#4CAF50; color: white;
padding: 12px 20px;
border: none;
borderradius: 4px;
cursor: pointer;

}

input[type="submit"]:hover {  background-color:

#45a049;

}

.form-group { marginbottom: 16px;

}



.error
{
color: red;
fontsize:
12px;
margi ntop:
4px;

}

</style>

</head>

<body>

<h1>Table and Form</h1>


<table>

<thead>

<tr>

<th>Name</th>

<th>Email</th>

<th>Phone</th>

</tr>
```

```
</thead>
<tbody>
<tr>
<td> Bittu Kumar</td>
<td>bittu@example.com</td>
<td>8002704205</td>
</tr>
<tr>
<td>Rana Jee</td>    <td>ranajee@example.com</td>  <td>7070603571</td>
</tr>
</tbody>
</table>

<form>
<h2>Contact Form</h2>

<div class="form-group">
<label for="name">Name</label>
<input type="text" id="name" name="name" required>
<span class="error">Please enter your name</span>
</div>

<div class="form-group">
<label for="email">Email</label>
<input type="text" id="email" name="email" required>
<span class="error">Please enter a valid email address</span>
</div>

<div class="form-group">
<label for="message">Message</label>
<textarea id="message" name="message" required></textarea>
<span class="error">Please enter a message</span>
</div>
```

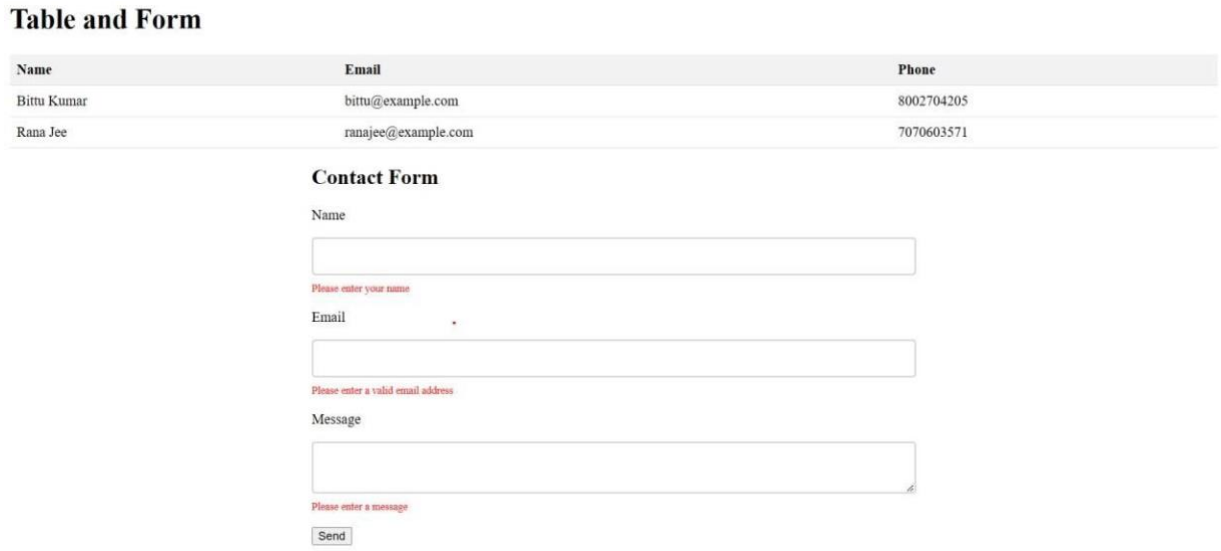
<input type="submit" value="Send">

</form>

</body>

</html>

OUTPUT :-



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

<html>

<head>

<title>Table and Form with CSS</title>

<style>

/* Table Styles */

table {

border-collapse: collapse; width: 100%;

}

th, td

{ text-

align:

left;

padding: 8px;

borderbottom: 1px

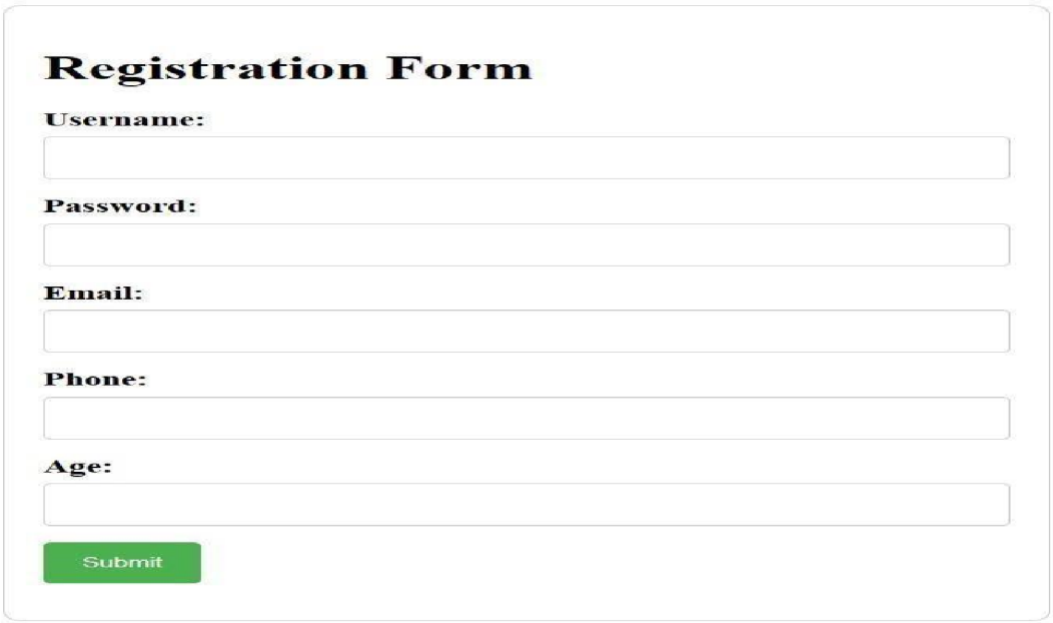
solid #ddd;

```
    }
th {        background-color:
#f2f2f2;
    }

    /* Form
Styles */    form {      width:
50%;      margin: 0
auto;
    }

        label
{
display: block;       margin-bottom:
8px;
    }

    input[type="text"], textarea {      width:
100%;      padding:
12px 20px;      margin:
8px 0;      box-sizing: border-
box;      border: 2px solid
#ccc;      borderradius: 4px;
     resize: vertical;
    }


input[type="submit"] {
background-color:
#4CAF50;      color: white;
padding: 12px 20px;
border: none;
borderradius:
4px;        cursor:
pointer;
    }

    input[type="submit"]:hover {      background-color: #45a049;
    }
```

```
    .form-group {
margin-bottom: 16px;
    }

    .error {       color: red;
font-size:
12px;         margintop: 4px;
    }
  </style>
 </head>
 <body>
  <h1>Table and Form</h1>

  <table>
   <thead>
    <tr>
     <th>Name</th>
     <th>Email</th>
     <th>Phone</th>
    </tr>
   </thead>
   <tbody>
    <tr>
     <td>Yash Sojitra</td>
     <td>sojitra@example.com</td>          <td>8955858555</td>
    </tr>
    <tr>
     <td>Smit Gajera</td>
     <td>gajera@example.com</td>
     <td>7856855678</td>
    </tr>
   </tbody>
```

```
</table>

<form>
 <h2>Contact Form</h2>

 <div class="form-group">
  <label for="name">Name</label>
  <input type="text" id="name" name="name" required>
  <span class="error">Please enter your name</span>
 </div>

 <div class="form-group">
  <label for="email">Email</label>
  <input type="text" id="email" name="email" required>
  <span class="error">Please enter a valid email address</span>
 </div>

 <div class="form-group">
  <label for="message">Message</label>
  <textarea id="message" name="message" required></textarea>
  <span class="error">Please enter a message</span>
 </div>

 <input type="submit" value="Send">
</html>
```

OUTPUT:



</form>

</body>

5.Make a Resume using the HTML tags with CSS.?

```
<!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>         *{
line-height: 40px;
        }         /* .head{
width: 100%;              height: 50px;
padding-top: 20px;              line-
height: 20px;             background-
color: chartreuse;              color:
white;             text-align: center;
font-size: 40px;
            text-shadow: cornflowerblue;
        } */         .container{
display: flex;              box-
sizing: border-box;
        }
        .box1{
            /* float: left; */
height: 1500px;             width: 700px;
background-color: blueviolet;
border: 2px solid black;
align-items:center;             justify-
content: center;
overflow:auto;



        }
        .box2{
            /* float: left; */
height: 1500px;             width:
1175px;
            background-color:darkmagenta;
border: 2px solid black;
        }         /* .pic{
height: 250px;
width: 250px;
background-color: white;
margin: 10% 30%;
border: 10px solid
```

```
yellowgreen;
border-radius: 50%;
        } */         .pic img{
height: 250px;              width: 250px;
background-color: white;
border: 10px solid yellowgreen;
border-radius: 50%;             margin: 8%
28%;
                    }
h1{             font-size: 50px;
margin-bottom: 10px;
        }         p{
font-size: 30px;
margin-top: 0px;
        }         .phone{
margin: 10px 0px;
        }         .phone img{
height: 30px;             width: 30px;
background-color: blueviolet;

        }         .phone a{
height: 30px;             width:
30px;             font-size: 30px;
text-decoration: none;
margin-left: 10px;
color: black;
                    }
ul{            margin-top:
10px;
      }        ul li{
font-size: 30px;
margin-left: 20px;

      }
      .name{
 width: 96%;
 height: 150px;
           font-size: 120px;
text-align: center;             text-
transform: uppercase;
background-color:violet;
padding-left: 20px;             padding-
top: 60px;             margin-left: 20px;
border-radius: 10px;

        }                  h2{
width: 96%;             height: 70px;
background-color: violet;
text-transform: capitalize;
font-size: 50px;             padding-
```

```
left: 20px;             margin-left:
20px;             margin-bottom: 10px;
padding-top: 20px;             border-
radius: 10px;
        }          table{
font-size: 30px;
margin-left: 30px;

        }

    </style>
</head>
<body>
    <!-- <header>
        <div class="head">Resume</div>
    </header> -->
    <div class="container">
        <div class="box1">
           <div class="pic"><img src="kishanphoto.jpg" alt="photo"></div>
           <h1>Objective Statement</h1>
           <p> </p>
           <h1>Contact</h1>
           <div class="phone">
               <img src="https://cdn-icons-png.flaticon.com/512/0/191.png" alt="phone
icon">
               <a href="+919157315510">+919157315510</a>
           </div>
           <div class="phone">
               <img src="https://www.svgrepo.com/download/14478/email.svg" alt="Email
icon">
                <a href="kishansavani456@gmail.com"> kishansavani456@gmail.com</a>
            </div>
            <div class="phone">
                <img src="https://w7.pngwing.com/pngs/848/762/png-transparentcomputer-
icons-home-house-home-angle-building-rectangle-thumbnail.png" alt="Address icon">
                <a href="Bhavnagar,Gujarat"> Bhavnagar,Gujarat</a>
            </div>
            <div class="phone">
                <img src="https://www.iconpacks.net/icons/1/free-linkedin-icon-
112thumb.png" alt="Linkdin icon">
                <a href="linkedin.com/in/kishan-savani37872">linkedin.com/in/ kishan-
savani37872</a>
            </div>
            <div class="lang">
                <h1>Language</h1>
                <ul>
                    <li>Gujarati</li>
                    <li>Hindi</li>
```

```
            <li>English</li>
        </ul>
    </div>
    <div class="lang">
        <h1>Hobbies</h1>
        <ul>
            <li>Playing Cricket</li>
            <li>Learning new skill(Releted to my field)</li>
        </ul>
    </div>

</div>
<div class="box2">
    <div class="name">Kishan Savani</div>
    <div class="education">
        <h2>education</h2>
        <table>
            <tr>
               <td>Aditya silver oak institute of technology</td>
               <td><b>2022-2026</b></td>
           </tr>
           <tr>
               <td><b>B.Tech(CE)</b></td>
               <td>Pursuing</td>
           </tr>
           <tr>
               <td>Vidyadhish Vidyasankul</td>
               <td><b>2020-2022</b></td>
           </tr>
            <tr>
                <td><b>HSC</b></td>
                <td>68.4%</td>
            </tr>
            <tr>
                <td>P.M. Sarvodaya High SChool</td>
                <td><b>2019-2020</b></td>
            </tr>
            <tr>
                <td><b>SSC</b></td>
                <td>87.5%</td>
            </tr>
        </table>
    </div>

    <div class="tech">
        <h2>Technical Skill</h2>
        <ul>
            <li>C</li>
```

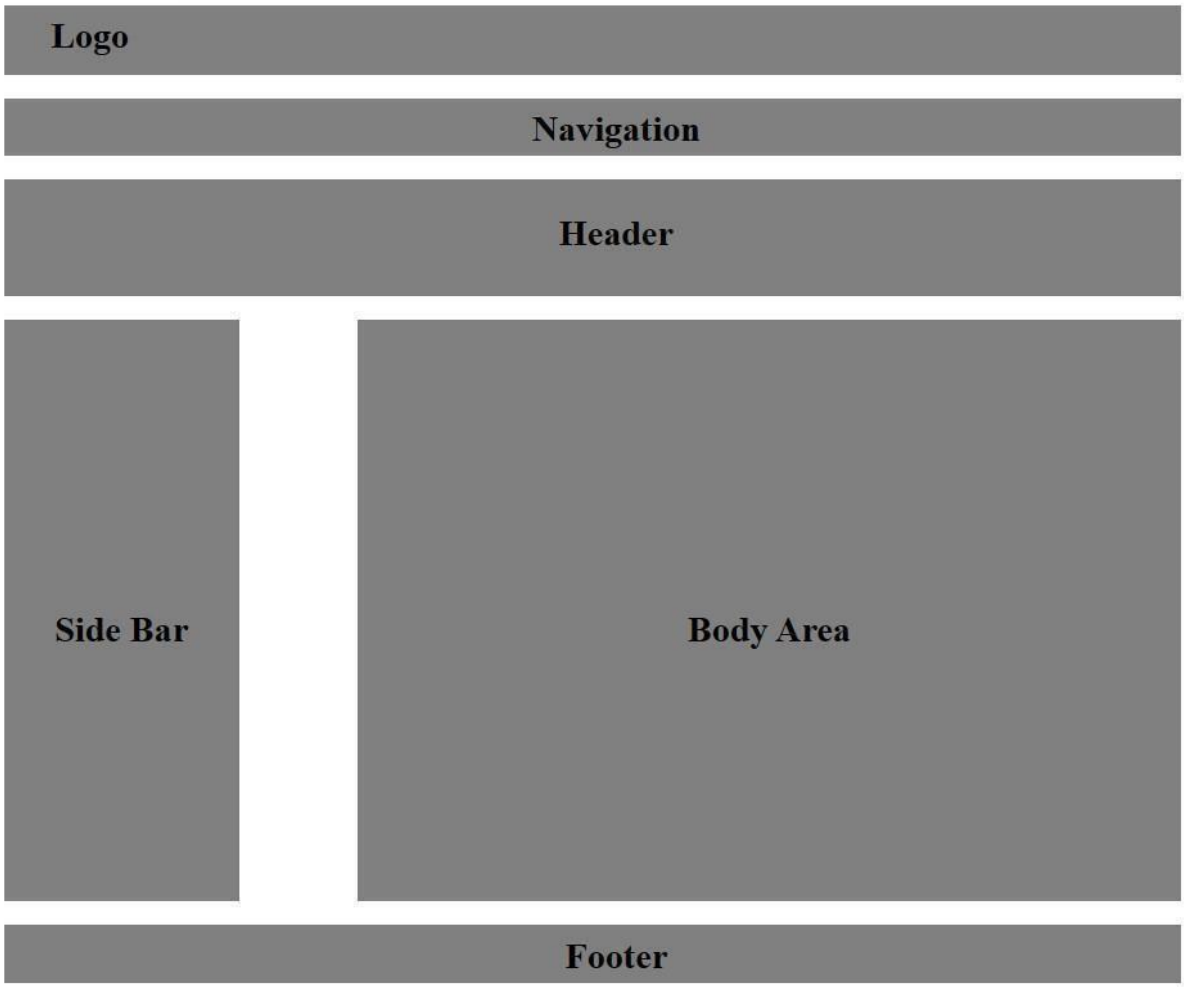
```
                <li>C++</li>
                <li>HTML</li>
                <li>CSS</li>
                <li>PHP</li>
            </ul>
        </div>
        <div class="soft">
            <h2>Soft Skill</h2>
            <ul>
                <li>Teamwork</li>
                <li>Time Management</li>
                <li>Problem Solving</li>
            </ul>
        </div>

        <div class="achivement">
        </div>
    </div>
</div>
</body>
</html>
```

6.Create an HTML Page containing the following Gray Layout using CSS.??

```
<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>Gray layout 1</title>

  <style>

    *{font-size: 30px;font-weight: bolder;}

    #r1{background-color: gray; height: 50px; width: 48%; padding-top: 10px;padding-left: 2%;margin-bottom: 20px;}

    #r2,#r5{background-color: gray; height: 40px; width: 48%; padding-top: 10px;paddingleft:

2%;margin-bottom: 20px; text-align: center;}

    #r3{background-color: gray; height: 70px; width: 48%; padding-top: 30px;padding-left: 2%;margin-bottom: 20px; text-align: center;}
```

```
    #r4{height: 500px; width: 100%; margin-bottom: 20px;}
    #r4 div{float: left; background-color: gray; padding-top: 250px; height: 250px; textalign: center;}
    #r4c1{width: 10%; margin-right: 5%; }
    #r4c2{width: 35%; }
  </style>
</head>
<body>
  <div id="maindiv">
  <div id="r1">Logo</div>
  <div id="r2">Navigation</div>
  <div id="r3">Header</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>
```

OUTPUT :-



7.Demonstrate JavaScript Form Validation with proper examples.?

```
<html>
 <head>
   <title>Basic Form Validation</title>
<script>       function  validateForm()
{
      var name =
document.forms["myForm"]["name"].value;       var email =
document.forms["myForm"]["email"].value;       var  password
=
document.forms["myForm"]["password"].value;
      if (name == "" || email == "" || password == "") {
        alert("Please fill out all fields");          return false;
```

```
    }
   }
  </script>
 </head>
 <body>
  <form name="myForm" onsubmit="return validateForm()">
   <label for="name">Name:</label>
   <input type="text" id="name" name="name">
   <br><br>
   <label for="email">Email:</label>
   <input type="email" id="email" name="email">
   <br><br>
   <label for="password">Password:</label>
   <input type="password" id="password" name="password">
   <br><br>
   <input type="submit" value="Submit">
  </form>
 </body>
</html>
```

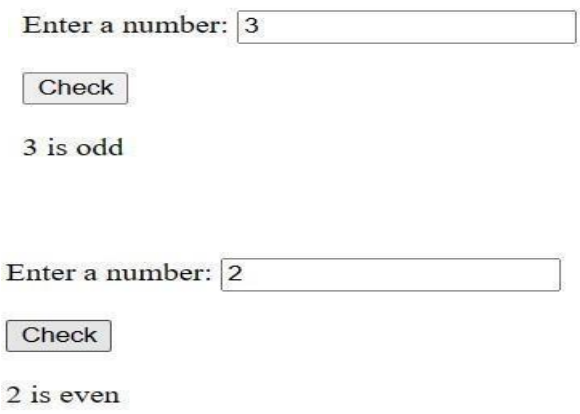
OUTPUT :-

8.Write a javascript to check if the number is even or odd.?

```
<html>
 <head>
  <title>Even or Odd Checker</title>
```

```
  <script>
    function checkEvenOrOdd()
    {
      var number =
document.getElementById("number").value;       if (number%2==0)
      {
        document.getElementById("result").innerHTML = number + " is even";
      } else {
        document.getElementById("result").innerHTML = number + " is odd";
      }
    }
  </script>
 </head>
 <body>
  <label for="number">Enter a number:</label>
  <input type="number" id="number">
  <br><br>
  <button onclick="checkEvenOrOdd()">Check</button>
  <br><br>
  <div id="result"></div>
 </body>
</html>
```

OUTPUT :-

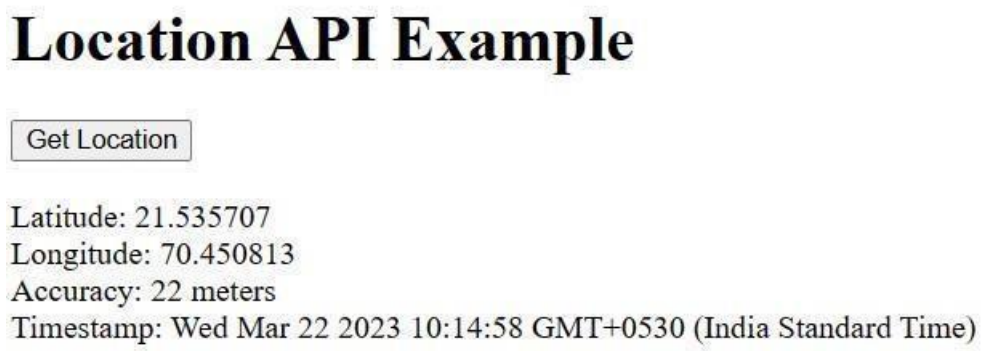


9.Create a page and access the LocationAPI.?

```
<html>
 <head>
  <title>Location API Example</title>
  <script>       function getLocation()
   {
    if (navigator.geolocation)
    {
     navigator.geolocation.getCurrentPosition(showPosition);
    }
e  ls
e
{
      alert("Geolocation is not supported by this browser.");
    }
   }

   function showPosition(position)
   {
    var latitude =  position.coords.latitude;
var   longitude =
position.coords.longitude;       var accuracy = position.coords.accuracy;       var
timestamp = new Date(position.timestamp);

    document.getElementById("latitude").innerHTML = "Latitude: " + latitude;
document.getElementById("longitude").innerHTML = "Longitude: " + longitude;
document.getElementById("accuracy").innerHTML = "Accuracy: " + accuracy + " meters";
document.getElementById("timestamp").innerHTML = "Timestamp: " + timestamp;
   }
  </script>
 </head>
 <body>
  <h1>Location API Example</h1>
  <button onclick="getLocation()">Get Location</button>
```

```
  <br><br>
  <div id="latitude"></div>
  <div id="longitude"></div>
  <div id="accuracy"></div>
  <div id="timestamp"></div>
 </body>
</html>
```

OUTPUT :-



10.Create a simple XMLHTTPRequest,and retrieve the data from the text file.?

```
<!DOCTYPE html>
<html>
  <head>
    <title>XMLHttpRequest Example</title>
    <script>  function loadData() {
       // Create a new XMLHttpRequest object  var xhttp =
       new XMLHttpRequest();

       // Set the onreadystatechange function to handle the response  xhttp.onreadystatechange = function() {
         if (this.readyState == 4 && this.status == 200) {  // Display the response text in an
          HTML element  document.getElementById("data").innerHTML = this.responseText;
         }
       };
       // Open a GET request to the text file  xhttp.open("GET", "data.txt",
       true);
```

```
        // Send the request                                    xhttp.send();
      }
    </script>
  </head>
  <body>
    <h1>XMLHttpRequest Example</h1>
    <button type="button" onclick="loadData()">Load Data</button> <div id="data"></div>
  </body>
</html>
```

DBMS PRACTICALS

1.To study DDL-create and DML-insert commands.?

DDL and DML are two types of SQL commands. DDL stands for Data Definition Language, and it is used to create and modify the structure of database objects, such as tables, indexes, and views. DML stands for Data Manipulation Language, and it is used to insert, update, and delete data in a database.

Here are some examples of DDL and DML commands:

DDL - CREATE TABLE:

The CREATE TABLE statement is used to create a new table in a database. Here is an example:

```
CREATE TABLE customers ( id INT
PRIMARY KEY, name VARCHAR(50),
email VARCHAR(50), phone
VARCHAR(20)
);
```

This statement creates a new table named "customers" with four columns: id, name, email, and phone. The id column is defined as the primary key, which means that it will contain a unique value for each row in the table.

DDL - ALTER TABLE:

The ALTER TABLE statement is used to modify the structure of an existing table in a database. Here is an example:

```
ALTER TABLE customers
```

ADD address VARCHAR(100);

This statement adds a new column named "address" to the "customers" table.

DML - INSERT INTO:

The INSERT INTO statement is used to insert new rows into a table. Here is an example:

INSERT INTO customers (id, name, email, phone)

VALUES (1, 'John Doe', 'john.doe@example.com', '555-1234');

This statement inserts a new row into the "customers" table with the specified values for the id, name, email, and phone columns.

DML - UPDATE:

The UPDATE statement is used to modify existing rows in a table. Here is an example:

UPDATE customers

SET phone = '555-5678'

WHERE id = 1;

This statement updates the "phone" column for the row with id 1 in the "customers" table.

DML - DELETE:

The DELETE statement is used to delete rows from a table. Here is an example:

DELETE FROM customers

WHERE id = 1;

This statement deletes the row with id 1 from the "customers" table.

2. Create tables and insert sample data in tables.?

Insert following values in the table **Employee.**

emp_n	emp_name	emp_sal	emp_comm	dept _no
101	Smith	800		20
102	Snehal	1600	300	25
103	Adama	1100	0	20
104	Aman	3000		15
105	Anita	5000	50000	10
106	Sneha	2450	24500	10
107	Anamika	2975		30

CODE :-

```
CREATE TABLE Employee (

 emp_no INT PRIMARY KEY,  emp_name VARCHAR(30)
NOT NULL,  emp_sal DECIMAL(8,2)
NOT NULL,  emp_comm
DECIMAL(6,1),  dept_no INT NOT NULL

);


INSERT INTO Employee (emp_no, emp_name, emp_sal, emp_comm, dept_no) VALUES
(101, 'Smith', 800.00, 20, 0),

 (102, 'Snehal', 1600.00, 300, 25),

 (103, 'Adama', 1100.00, 0, 20),
```

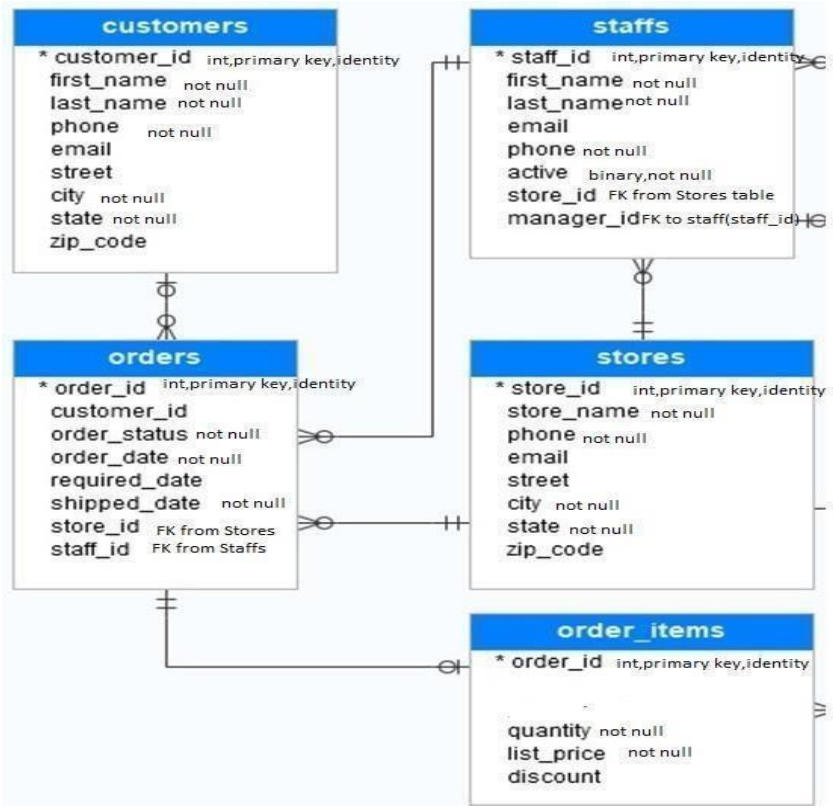
(104, 'Aman', 3000.00, 15, 0),

(105, 'Anita', 5000.00, 50000, 10),

(106, 'Sneha', 2450.00, 24500, 10),

(107, 'Anamika', 2975.00, 30, 0);

3. Write the SQL queries to provide constraints on given tables.?



CODE :-

```
CREATE TABLE customers (   customer_id INT
PRIMARY
KEY,
          first_name
VARCHAR(50) NOT NULL,
last_name VARCHAR(50) NOT
NULL,   phone
VARCHAR(20),   email
VARCHAR(100),   street
VARCHAR(100),                city
VARCHAR(50) NOT NULL,  state
VARCHAR(50) NOT  NULL,


 zip_code VARCHAR(20)
```

```
);

CREATE TABLE staff ( staff_id
INT PRIMARY KEY,
first_name VARCHAR(50)
NOT NULL, last_name
VARCHAR(50) NOT NULL,

email VARCHAR(100), phone
VARCHAR(20) NOT

NULL, active BOOLEAN NOT

NULL, store_id INT,

FOREIGN KEY (store_id) REFERENCES stores(store_id)

);


CREATE TABLE stores ( store_id
INT PRIMARY KEY,
store_name VARCHAR(50) NOT
NULL, phone
VARCHAR(20) NOT NULL,

email VARCHAR(100), street
VARCHAR(100), city
VARCHAR(50) NOT
NULL, state
VARCHAR(50) NOT
NULL, zip_code
VARCHAR(20), manager_id INT,

FOREIGN KEY (manager_id) REFERENCES staff(staff_id)

);


CREATE TABLE orders ( order_id
INT PRIMARY KEY, order_date
DATE NOT NULL, required_date
DATE, shipped_date DATE NOT
NULL, order_status VARCHAR(20)
NOT NULL,


customer _id
INT, staff_id
INT, store_id
INT,
FOREIGN KEY (customer_id) REFERENCES customers(customer_id),
```

```
 FOREIGN KEY (staff_id) REFERENCES staff(staff_id),
 FOREIGN KEY (store_id) REFERENCES stores(store_id)
);

CREATE TABLE order_items (   order_id
INT,   item_id INT PRIMARY KEY,   quantity
INT
NOT NULL,   list_price DECIMAL(10,
2) NOT NULL,    discount DECIMAL(5,
2),
 FOREIGN KEY (order_id) REFERENCES orders(order_id)
);
```

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

1. List total deposit from deposit.
   CODE :- SELECT SUM(amount) AS total_deposit FROM deposit;

2. List total amount from andheri branch
   CODE :- SELECT SUM(amount) AS total_amount FROM deposit WHERE bname = 'andheri';

3. Count total number of customers
   CODE :- SELECT COUNT(DISTINCT cname) AS total_customers FROM deposit;

4. Count total number of customer's cities
   CODE :- SELECT COUNT(DISTINCT bname) AS total_cities FROM deposit;

5. Update the value dept_no to 10 where second character of emp. name is 'm'.
   CODE :- UPDATE Employee SET dept_no = 10 WHERE emp_name LIKE '_m%';

6. Update the value of employee name whose employee number is 103. **CODE :-** UPDATE Employee SET emp_name = 'Adam' WHERE emp_no = 103;

7. Write a query to display the current date. Label the column Date **CODE :-** SELECT GETDATE() AS Date;

8. For each employee, display the employee number, salary, and salary in creased by 15% and expressed as a whole number. Label the column New Salary
   CODE :- SELECT emp_no, emp_sal, ROUND(emp_sal*1.15,0) AS "New Salary" FROM Employee;

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

CODE :- SELECT emp_no, emp_sal, ROUND(emp_sal*1.15,0) AS "New Salary", ROUND(emp_sal*0.15,0) AS Increment FROM Employee;

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

1. Retrieve all data from employee, jobs and deposit.

CODE :- SELECT * FROM employee; SELECT * FROM jobs;

SELECT * FROM deposit;

2. Give details of account no. and deposited rupees of customers having account opened between dates 01-01-06 and 25-07-06. CODE :- SELECT a_no, amount FROM deposit

WHERE a_date BETWEEN '2006-01-01' AND '2006-07-25';

3. Display all jobs with minimum salary is greater than 4000.

CODE:- SELECT * FROM jobs WHERE min_sal > 4000;

4. Display name and salary of employee whose department no is 20. Give alias name to name of employee.

CODE :- SELECT emp_no, emp_name AS employee_name, emp_sal, dept_no FROM employee

WHERE dept_no = 20;

5. Display employee no,name and department details of those employee whose department lies in(10,20)

CODE :- SELECT emp_no, emp_name, dept_no FROM employee WHERE dept_no IN (10, 20);

6. Display all employee whose name start with ‘A’ and third character is ‘ ‘a’.

CODE :- SELECT * FROM employee

WHERE emp_name LIKE 'A _a%';

7. Display name, number and salary of those employees whose name is 5 characters long and first three characters are ‘Ani’.

CODE :- SELECT emp_name, emp_no, emp_sal FROM employee WHERE emp_name LIKE 'Ani___';

8. Display the non-null values of employees and also employee name second charactershould be ‘n’ and string should be 5 character long. **CODE :-** SELECT * FROM employee

```
WHERE emp_name LIKE '_n%' AND LENGTH(emp_name) = 5 AND
emp_name IS

NOT NULL;
```

9. Display the null values of employee and also employee name’s third character should be ‘a’.

CODE :- SELECT * FROM employee

```
WHERE emp_name LIKE '__a%' AND emp_name IS NULL;
```

.