Programming in C

Topic : Basic Programs

1. Write a program to print Hello World on output screen.
2. WAP to calculate Simple interest.
3. WAP to find out perimeter and area of the Square and Rectangle.
4. WAP to convert Fahrenheit temp in degree Celsius.
5. WAP to demonstrate arithmetic operation on two integer numbers.
6. Write a program which will accept three integer numbers from user and find out greatest among them using conditional operator.
7. Accept two numbers and perform swapping with third variable, and without third variable
8. WAP to accept five subject marks and find out total and average of the marks.
9. WAP which calculate speed for time and distance.

   Speed=(distance/time)

10. Command line program to find area of triangle

Topic : Selection statement

1. WAP to check whether a number is even or odd

2 . WAP to check whether a person is eligible for voting or not.

3. WAP to accept Cost Price from user and ask whether the user is a student or not. If the user is student and cost price is greater than 500, give discount of 10% ELSE discount will be 5%. If user is not student and cost price is greater 500 then give discount of 8% ELSE discount will be 2%. (Take all inputs from USER)

4. WAP to check whether Number is positive or negative or ZERO.

5. WAP a program to accept Percentage from user and check the GRADE

   A. Above 70% - Grade A

   B. Between 60% to 70% - Grade B+.

   C. Between 45% to 60% - Grade B.

   D. Between 35% to 45% - Grade C.

   E. Less than 35% - Fail

6.Accept three numbers from user and find out largest number among three and also find out whether that three numbers are equal or not.(else if ladder)

Topic : Branching statement

1. WAP using following menus-

   Choice-1: Accept number and find out square and cube.

   Choice-2: Check whether the given year is LEAP or not.

   If user enters wrong choice appropriate message should get displayed.

2. WAP using switch case for arithmetic operation on two numbers, if user enters an operator as choice, the appropriate operation should perform.

   If user enters wrong choice appropriate message should get displayed.

   i.e. + is for addition

   - is for subtraction

Topic : Looping statements

1. WAP to check whether a number is prime or not.

2. WAP to accept a number from user and find out sum of even digits from that given number.

3. WAP to print the following pattern :

```
    *
   ***
  *****
 *******
*********
```

4. WAP to print the following on output screen using jumping statements

```
1    5
2    4
4    2
5    1
```

5. WAP to print

```
1 1 1 2
3 2 2 2
3 3 3 4
```

6. GCD of three numbers

7. Find all pythagorean triplet below the given limit.

8. WAP to print

```
1
1 1
1 0 1
1 0 0 1
1 1 1 1 1
```

9. WAP to convert decimal to binary /binary to octal

Topic : Functions

1. WAP to demonstrate all four categories of functions for volume of the cylinder

   (volume of cylinder: 3.14*r*r*h)

   a) Function without parameters without return value.

   b) Function with parameter without return value.

   c) Function without parameter with return value.

   d) Function with parameters with return value.

2. WAP to calculate factorial of a number using a function. (using recursion)
3. WAP to print Fibonacci series.(also using recursion)
4. WAP to check whether a number is Armstrong number.
5. WAP to check whether a number is palindrome.
6. WAP to find HCF and LCM of given number using recursion.

Topic : Pointers

1. Write a program that declares a double, an int, and char variables. Next declare and initialize a pointer to each of the three variables. Your program should then print the address of, and value stored in.
2. Demonstrate addition of two floating type numbers by using call by address.
3. Demonstrate pointer arithmetic by assigning pointer “ptr” to variable “a” which is

having value as 100 in it.Perform increment operation on pointer ptr like ptr=ptr+2 and display which address that pointer ptr hold.

Topic : Array

1. WAP to calculate average marks of a 10 students.
2. WAP to sort array in ascending order.
3. WAP to find greatest and smallest number in an array.
4. WAP to find transpose of matrix
5. WAP to multiply a 3*3 matrix.
6. Write a C program to compute sum of diagonal elements of an array
7. Write a program to search particular value in an array and return the index number where it is located.
8. Perform following operations on two matrices with order m*n and p*q.
9. Addition of two matrix
10. Multiplication of two matrix
11. WAP to check whether two matrtices are identical or not.
12. Given a 2D array, print it in spiral form.

I/p ***1 2 3 4 5***

6 7 8 9 10

11 12 13 14 15

O/p ***1 2 3 4 5 10 15 14 13 12 11 6 7 8 9***

13. Write a program to print all the LEADERS in the array. (An element is LEADER if it is greater than all the elements to its right side.)

14. Sort array using bubble sort

Topic : String

1. WAP to compare two strings using strcmp ().
2. WAP to concatenate two strings without using library function.
3. WAP to convert upper-case string into lower-case and vice versa .Write your own functions for the same.
4. Find a character(or sub-string) in a string without using library function. And print its ascii

value

5. Eliminate vowels from string
6. WAP to check a string is palindrome.(Example Wow,bob,radar,sagas..etc).
7. WAP to count no of blank spaces in your paragraph without using string function and write it in your own function.
8. WAP to reverse the sentence or string without using library function.

   for example

   "hi all"

   reverse 1: "all hi"

   reverse 2: "lla ih"
9. WAP to show all possible library function for reading and writing String .
10. WAP to convert alternate characters of the string to uppercase.The first letter of the string has to be capital.

    I/p: We are the world

    O/p: We ArE tHe WoRlD
11. WAP to transform string of lowercase character by replacing each letter with subsequent character.
12. Write a program to count different types of characters in given string.
13. Dynamically read a string and sort it using bubble sort**.**

Topic : Dynamic Memory Allocation

1. Write a program to create memory for int, char and float variable at run time.

2. Write a program to input and print text using Dynamic Memory Allocation.

3. Write a program to read a one dimensional array, print sum of all elements along with inputted array elements using Dynamic Memory Allocation.

4. Write a program to read and print the student details using structure and Dynamic Memory Allocation.

5. Write a program to read and print the N student details using structure and Dynamic Memory Allocation.

Topic : File Handling

1. Write a program to read name and marks of n number of students from user and store them in a file.

2. Write a program to read name and marks of n number of students from user and store them in a file. If the file previously exits, add the information of n students.

3. Write a program to write all the members of an array of structures to a file using fprintf(). Read the array from the file and display on the screen.

4. Write to a text file using fprintf()
5. Write a Program to Append the Content of File at the end of Another.

6. Write a Program to Capitalize First Letter of every Word in a File.

7. Write a Program to Count No of Lines, Blank Lines, Comments in a para in a file .

8. Write a c program which produces its own source code as its output.

9. Write a program to remove spaces from a File and store the contents without space in a new file.

Topic : Structure and Union

1. Create a structure Student. Create array of 10 students using MACRO and display data in tabular form.
2. Create a structure Employee. Accept data for 5 employees and display it.
3. Demonstrate use of union and find out size of union variable and the attributes from union.
4. WAP to demonstrate typedef keyword.
5. WAP to copy one structure into another. Use concept of nested structures.
6. Create Employee structure having attributes as id, name and basic salary.
7. Create Date structure having attributes as dd,mm,yy.
8. Nest Date structure into Employee as to display joining date of employee.
9. Create a structure Employee. Pass it to a function by value.
10. Make a structure for banking customer which includes all the essential information like Name,Acc. No, Balance etc

OOPs With C++

Topic : CLASS AND OBJECTS

1. Create the following classes and write their appropriate class members and display proper information to user.
a) Time b) Date c) Person d) Student e) Fan f) Point g)Box

Create a class Team as follows with following data members such as,Country_Name,nameofPlayer,age,no_of_matches,batting_avg,balling_avg;
Accept 5 different records in array and display the records as follows:

Country Name	Player Name	Matches	Age	BattingAvg	BallingAvg
India	Sachin	295	30	45.51	53.00
Australia	Ricky	160	28	41.00	67.00
India	Saurav	230	31	40.95	30.00

2. An electricity board charges the following rates to domestic users to discourage large consumption of energy:
For the first 30 units - 1.50/- per unit
For next 200 units - 3.00/- per unit
Beyond 300 units - 4.25/- per unit
Create a class ElectricityBill for atleast 5 users with following opeartions….
Write a program to read the name of the user and number of units consumed and print out the charges with names.
If the total amount is more than Rs. 500.00 then an additional rcharge of 15% is added.

3. Write a program to implement a sphere class with appropriate members and member function to find the surface area and volume: (Surface =4pie r2 and vol=4/3 pie r3)

4. Write a program to implement a telephone bill class with Name, Address, Tel. No., No. of calls as data members. Compute the amount to be paid if the charges per call is Rs. 2/-.

Topic : Constructor and Destructor

1. Create the following classes and write member functions and display proper information to user using constructor and destructor.
a) Time b) Date c) Person d) Student e) Fan f) Point

2. Define a class to represent a bank account. Include the following members
Data Members
1. Name of the depositor

2. Account number
3. Type of account
4. Balance amount in the account.

Member functions

1) To assign initial values
2) To deposit an amount
3) To withdraw an amount after checking the balance
4) To display name and balance.

3. Define class student which shows the information about the Student using constructor and destructor - Include the following members

Data Members

1. Name of the Student
2. Roll No
3. Address
4. Percentage

Member functions

1. To assign initial values
2. To accept the values from user.
3. To display all data to user including Grade by using following conditions
    a. Per>=70 Distinction
    b. Per <70 and Per >=60 First Class
    c. Per<60 and Per>=40 Second class
    d. Per<40 Student is Fail

Topic : Reference variable, Copy Contructor

1. Create the following classes and write member functions and display proper information to user using constructor and destructor also use this pointer.
   a) Time b) Date c) Person d) Student e) Fan f) Point

2. Swap two numbers using reference variable. Create class Swap.

3. Write a program to implement flight class with data member as flight no., source, destination and fare. Write a copy constructor and a member function to display the flight information.

4. A book shop maintains the inventory of books that are being sold at the shop. The list includes details such as author, title, price, publisher and no. of copies. Whenever a customer wants a book, the sales person inputs the title and author and the system searches the list and displays whether it is available or not. If it is not, an appropriate message is displayed. If it is, then the system displays the book details and requests for the number of copies required. If the requested copies are available, the total cost of the

requested copies is displayed; otherwise the message “Required copies not in stock” is displayed.

Incorporate the following features:
a.Value of attributes should be assign to some value.
b.Create Accept_book_Info() and Display_Book_Status() methods.

5. Create one class Library which having data members as author, title, price, publisher and no. of copies. Assign some specific values to all its data members and create member functions as Accept_Book_info(),Print_Book_info().
   Create function such as Selling_Prise() on the following basis of conditions:
   If Actual price of the book is greater than equal to 2500/- then discount=1.00%
   If actual price is less than 2500/- then discount=0.5%
   Then find out final selling price of the book.

Topic : Inline, friend function and static data members

1. Implement inline function for the following programs-
   a. Square of the number
   b. Cube of the number
   c. Area of rectangle
2. Find out largest number between two numbers by implementing two different classes as-
   a. Number1-include n1 as variable and get_a(),disp_a() as functions.
   b. Number2-include n2 as variable and get_b(),disp_b() as functions.
   c. Create one common function as friend of both Number1 and Number2 class.
3. Demonstrate static member function with static data member in one class.

Topic : Function overloading

1. Demonstrate function overloading for addition of two integer and two floating point numbers.

2. Swap two integer numbers and two characters using function overloading.

3. Area of Rectangle, Circle and Square.

Topic : Operator overloading

1. Demonstrate unary ++ operator using operator function
2. Make addition of Two Complex numbers using binary + operator(using friend function)
   a. C1- 20+i30

   b. C2- 14+i10
   c. Resultant complex number is- 34+i40
3. Add two values times and display resultant time in the hr.: min: sec form using friend function(overload binary + operator)
   a. T1- 2:40:35
   b. T2- 3:35:30

Resultant time is- 06:16:05

Topic : Generic Functions And Exception Handling

1. WAP using generic function to find sum of 2 numbers.

2. WAP using exception handling if in the division the denominator is negative.

Database

Table Name : Employee

Employee_id	First_name	Last_name	Salary	Joining_date	Department
1	John	Abraham	1000000	01-JAN-13 12.00.00 AM	Banking
2	Michael	Clarke	800000	01-JAN-13 12.00.00 AM	Insurance
3	Roy	Thomas	700000	01-FEB-13 12.00.00 AM	Banking
4	Tom	Jose	600000	01-FEB-13 12.00.00 AM	Insurance
5	Jerry	Pinto	650000	01-FEB-13 12.00.00 AM	Insurance
6	Philip	Mathew	750000	01-JAN-13 12.00.00 AM	Services
7	TestName1	123	650000	01-JAN-13 12.00.00 AM	Services
8	TestName2	Lname%	600000	01-FEB-13 12.00.00 AM	Insurance

Table Name : Incentives

Employee_ref_id	Incentive_date	Incentive_amount
1	01-FEB-13	5000
2	01-FEB-13	3000
3	01-FEB-13	4000
1	01-JAN-13	4500
2	01-JAN-13	3500

1. Create Table Employee & Incentives using above table
2. Add Primary key Constrains to both table;
3. Write Sql Syntax to create EMPLOYEE_REF_ID in INCENTIVES table as foreign

key with respect to EMPLOYEE_ID in employee table

4. Write SQL to drop foreign key on employee table

Topic : Select

1. Get all employee details from the employee table
2. Get First_Name,Last_Name from employee table
3. Get First_Name from employee table in upper case

Topic : SQL Order By

1. Get unique DEPARTMENT from employee table
2. Get all employee details from the employee table order by First_Name Ascending
3. Get all employee details from the employee table order by First_Name Ascending and Salary descending

Topic : SQL Group By Query

1. Get department,total salary with respect to a department from employee table.
2. Get department,total salary with respect to a department from employee table order by total salary descending
3. Get department,no of employees in a department,total salary with respect to a department from employee table order by total salary descending
4. Get department wise average salary from employee table order by salary ascending
5. Get department wise maximum salary from employee table order by salary ascending
6. Select no of employees joined with respect to year and month from employee table
7. Select department,total salary with respect to a department from employee table where total salary greater than 800000 order by Total_Salary descending

Topic : SQL Where Condition

1. Get employee details from employee table whose employee name is “John”
2. Get employee details from employee table whose employee name are “John” and “Roy”

3. Get employee details from employee table whose employee name are not “John” and “Roy”

Topic : SQL Wild Card Search

1. Get employee details from employee table whose first name starts with 'J'
2. Get employee details from employee table whose first name contains 'o'
3. Get employee details from employee table whose first name ends with 'n'

Topic : SQL Pattern Matching

1. Get employee details from employee table whose first name ends with 'n' and name contains 4 letters
2. Get employee details from employee table whose first name starts with 'J' and name contains 4 letters
3. Get employee details from employee table whose Salary greater than 600000
4. Get employee details from employee table whose Salary less than 800000
5. Get employee details from employee table whose Salary between 500000 and 800000
6. Get employee details from employee table whose name is 'John' and 'Michael'

Topic : SQL Join

1. Select first_name, incentive amount from employee and incentives table for those employees who have incentives
2. Select first_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000
3. Select first_name, incentive amount from employee and incentives table for all employes even if they didn't get incentives
4. Select first_name, incentive amount from employee and incentives table for all employees who got incentives using left join

Topic : SQL DATE Functions

1. Get employee details from employee table whose joining year is “2013”

2. Get employee details from employee table whose joining month is “January”
3. Get employee details from employee table who joined after January 31st
4. Get database date
5. Get Employee ID's of those employees who didn't receive incentives without using sub query ?(MINUS)
6. Delete employee data from employee table who got incentives in incentive table
7. Update incentive table where employee name is 'John'

Topic : SQL Union

1. Select First_Name,LAST_NAME from employee table as separate rows

Topic : Views

1. Create view for Employyee which displays id name of Employee.
2. Update view to add Salary column to View
3. drop View

Topic : INDEX

1. Creates an index on a table Employee.
2. Create Forced Index on new Table which is not exit in Database
3. Drop Index

HTML
Day 1

1. Create simple HTML file with name “Basictags.html” in which used following tags.
    a. HTML b) HEAD c) TITLE d)BODY

Write a paragraph in body.

2. Add following tags in above “Basictags.html” file and format the paragraph by using these tags.
    a. Use different comments
    b. <u>-underline
    c. <i>-italic text
    d. <b>-bold text
    e. <strike>-Strikethrough
    f. <section>
    g. <sup>-superscript
    h. <sub>-subscript
    i. <Center>-center tag.
    j.
-break the line
    k. <article>
    l. <address>
3. Create simple HTML file with name “Headingtags.html” in which use all heading tags.
    a. Write sentence as “Welcome at Profound Edutech [P] Ltd.”

4. Give background color “sky blue” for whole body of the above file “Headingtags.html” text and use “align” attributes (left, right, center) for body text.

5. Create webpage “fontDemo.html” in which create following logos
    a. 

    b. 

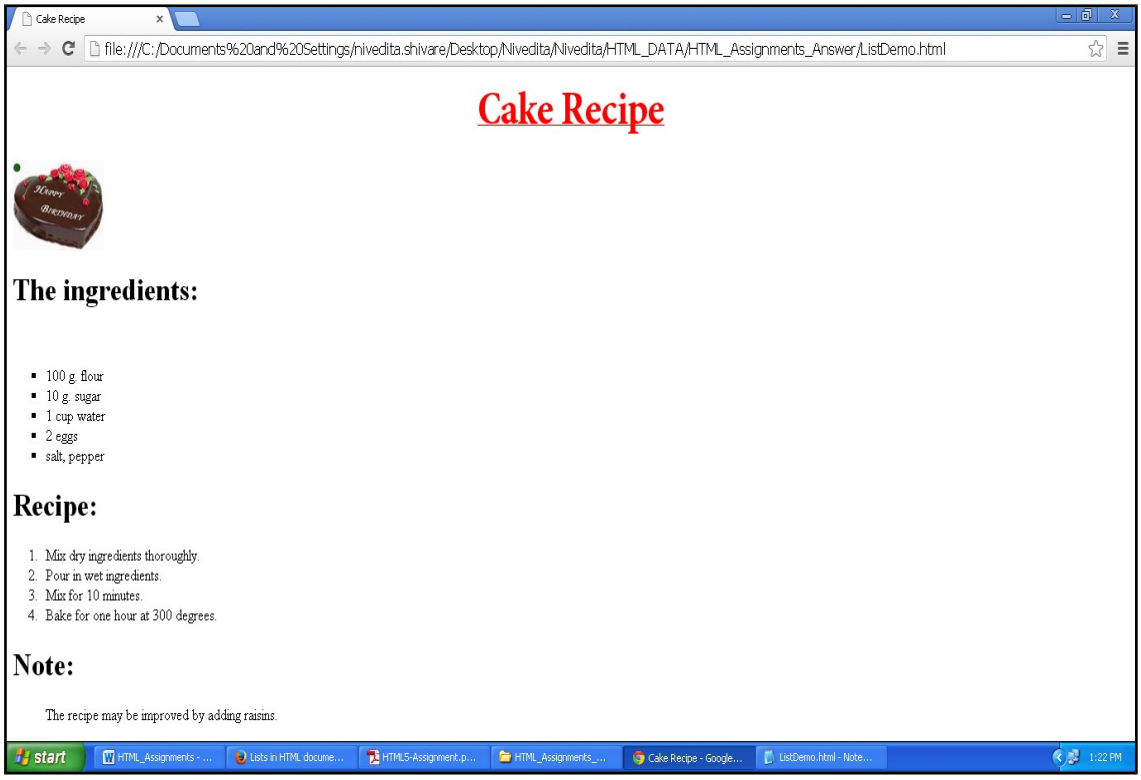
Use font face, size that you want.

6. Create a webpage “WebimageDemo.html” and set images using <picture> tag having left alignment and having border. Set height and width also as you required.

7. Create webpage “HyperlinkDemo1.html”in which create two links namely
    a. Click to open www.google.com

b. Click to open www.profoundedutech.com

8. Create webpage “HyperlinkDemo1.html”in which attach file “Basictags.html” to a text “Click to view Basic tags Demo in HTML” and insert one image and create hyperlink for that image, attach file to image as “WebimageDemo.html”.
9. Create a webpage “ListDemo.html” which gives information about Cake recipe. Create webpage as follows,



Day 2

1)Create webpage “MaruqueeDemo.html” in which apply following effects on text,
Direction=Left, Right, Up, Down
Behavior=Alternate

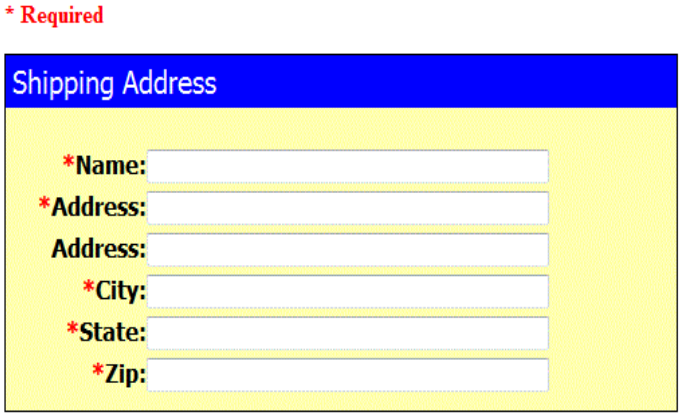
Design following table with heading Student Report

Name of Student:		Module:	
Name of Partner:		Assignment No:	
Date of		Status:	

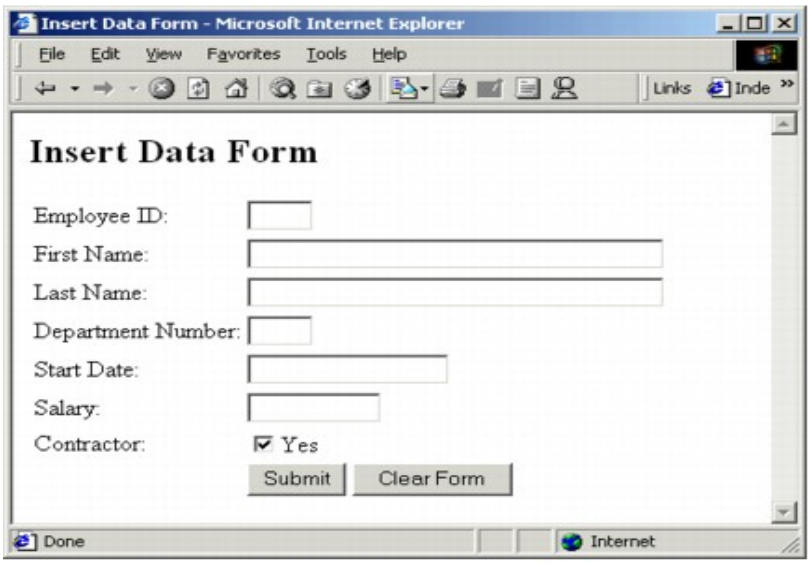
Evaluation:			
Remark:			
Name of evaluator:		Signature:	

Create a table as below

2)Create form " Shopping Address" form & add in Browser of shopping webpage.



3)Create form " Employee Details"



4)Design a Web page which includes a small video & audio clip in 2 Frames.

Advanced Assignments for HTML with JS

1)Display a user Location (Longitude & latitude)
2)Take a image in Browser & change its Position using Drag & Drop Concept.
3)Using above from(Ass3) take Employees Data from user, Store Employees Data in Local storage & Display it again in new web page. Check how many Employee's records are inserted using Session Storage.

CSS
Day 1

1)Text & Fonts
Create a paragarph in webpage & do Folowing Changes:
Setting the text color

•Alignment of text
•Indentation of text
•Decoration of text
•Sets the spacing between characters
•Text wrapping inside an element
•Vertical alignment of an image inside text & Sets the font of a text
•Sets the size of the font
•Sets the style of the font
•Sets the variant of the font
•Sets the boldness of the font
•Setting the all font properties in a single declaration - The font shorthand property

2)Create Login form using HTML and apply following CSS formatting

For User Name text box-Background color =yellow

For Password text box-Background color =pink

For all buttons -Background color =green

3)Create 2 Paragraphs having 2 Different CSS Properties

[font-color as blue & Pink

font- family as Arial & times new roman

Size as 30 & 50

Background color as yellow / green]

4)Create formatting for following text

This is Paragraph tag

<h3>This is heading tag 3</h3>

<h6>This is heading tag 6</h6>

font-color as blue

font- family as Arial

Size as 30

Background color as yellow

Day 2

1)CSS Positioning

- Position an element relative to the browser window
- Position an element relative to its parent element

2)CSS Display

•Hide an element using the visibility property

•Display an element as an inline element

•Display an element as a block element

•3)CSS Border and Outlines

•Draw border around element
•Draw border on the individual sides of an element
•Setting different styles for the borders
•Setting the all border properties at once - The border shorthand property
•Creating the rounded corners around an element
•Using images for creating borders

4)CSS Margin and Padding

•Sets the margins for individual sides of an element
•Setting all margin properties in a single declaration - The margin shorthand property
•Sets the paddings for individual sides of an element
•Setting all padding properties at once - The padding shorthand property

5)CSS Pseudo-classes

•Setting styles for different states of hyperlinks
•Setting styles for form element in focus using the :focus pseudo-class
•Setting the styles for first child of an element using the :first-child pseudo-class
•Setting styles for last child of an element using the :first-child pseudo-class
•Setting styles for nth-child of an element using the :nth-child pseudo-class
•Setting styles for specific language using the :lang() pseudo-class
•Using pseudo-classes with selectors

6)CSS Pseudo-elements

•Creating the drop cap effect using the ::first-letter pseudo-element
•Styling the first line of a text differently using the ::first-line pseudo-element
•Insert some content before and/or after an element using the ::before and/or ::after pseudo-element
•Using pseudo-elements with classes

7)CSS3 Drop Shadows

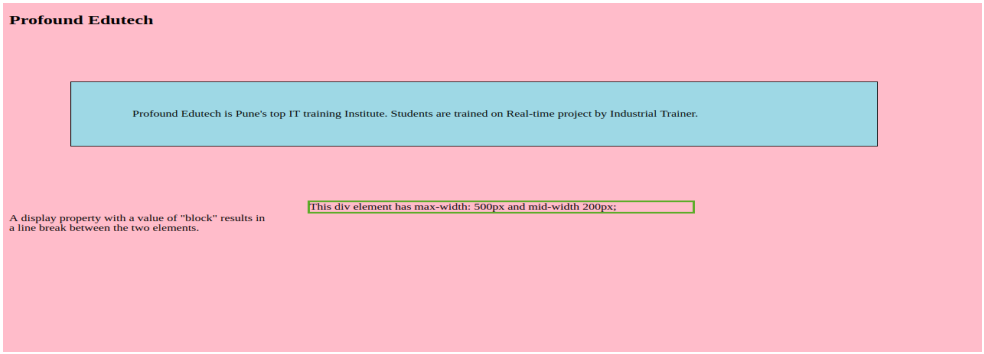
•Creating box shadow effect
•Adding multiple box shadows to an element's box
•Creating text shadow effect

8)Create a Simple Drop Down List for Different Links.

9)CSS3 Animations

•Animating elements on a web page
•Defining keyframe while creating animations

Reference Examples:



1)

```
body{
background-color:Pink
}
div.ex1{
    border: 1px solid black;
    margin-top: 100px;
    margin-bottom: 100px;
    margin-right: 150px;
    margin-left: 80px;
    background-color: lightblue;
     padding-top: 50px;
    padding-right: 30px;
    padding-bottom: 50px;
    padding-left: 80px;
}
div.ex2 {
    max-width:500px;
    min-width: 200px;
    margin: auto;
    border: 3px solid #73AD21;
}
span {
    display: block;
}
```

2)----------

The border-image Property

Here, the middle sections of the image are repeated to create the border:

border-image: url(b1.jpg) 30 round;

Here is the original image:

Note: Internet Explorer 10, and earlier versions, do not support the border-image property.

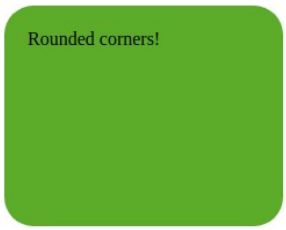
This is example of Box shadow!!

```
#borderimg {
    border: 20px solid transparent;
    padding: 15px;
    border-image: url(2.png) 30% round;
}
h1
{
        text-shadow: 2px 2px red;
}
div
{
        width: 300px;
    height: 100px;
    padding: 15px;
   background-color: yellow;
    box-shadow: 10px 10px grey;
}
```

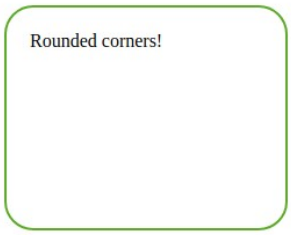
3)----------

The border-radius Property

Rounded corners for an element with a specified background color:



Rounded corners for an element with a border:



Rounded corners for an element with a background image:


```
#rcorners1 {
    border-radius: 25px;
    background: #73AD21;
    padding: 20px;
    width: 200px;
    height: 150px;
}

#rcorners2 {
    border-radius: 25px;
    border: 2px solid #73AD21;
    padding: 20px;
    width: 200px;
    height: 150px;
}
```

```
#rcorners3 {
    border-radius: 25px;
    background: url(paper.gif);
    background-position: left top;
    background-repeat: repeat;
    padding: 20px;
    width: 200px;
    height: 150px;
}
```

JAVASCRIPT

Assignments : (JavaScript&CSS)

Day-1

1. Write a program to sort the numbers in an array.

2. Write a program to find addition of first 10 numbers.

3. Write a program to print the numbers which are not divisible by 5 using continue in the range 1 to 20.

4. Write a program to find the number is odd or even.

Day-2

1. WAP to display following format on from using css and do the arithmetic operations.

Enter First No

Enter Second No

Addition Subtraction

Multiplication Division

Result

Day-3

2. WAP to display the message when first button is clicked ,as first button is selected and when second button is clicked, it will display the message that second button is clicked.use css for style.

Button1

Button2Day-3

1.Write a JavaScript program to compute the sum of the two given integers. If the two values are same, then returns triple their sum.

2.Write a JavaScript program to create a new string adding "Py" in

front of a given string. If the given string begins with "Py" then return the original string.

3.Write a JavaScript program to create a new string from a given string with the first character of the given string added at the front and back

4.Write a JavaScript program to reverse the elements of a given array of integers length 3

5.Write a javaScript program to replace uppercase letters to lowercase and vice versa

6.Write a JavaScript program to find the maximal difference between any two adjacent elements of a given array of integers.

7.Print todays Date,Date after 5 dyas in different Format.

8.Generate OPT using simple Function.(hint: use Math Object)

Day-4

1.Create Object Person1 having properties Name, ContactNo, Address & Display function to display details.

2.Create Object Person2 having properties Name, ContactNo, Address. Use Display Fun of Person1 Object to display details. [hint: use Call,Apply & Bind].

3.Design Employee class having members E_Id, Name, Desgnation. Write Parameterized constructor to accept values, Show function.Create 3 Employees & Display Details.

4.Add properties Salary,bonus & dissal() function using Prototype propery.

5.Create class Manager which extends Employee having additional properties incentive & totalsal() function which displays a salary+incentive as total salary.