**Day 1 : 10/16/20**

emp.txt

Id, name, salary

store employee details

pipe command

ls | mkdir Abc

command | command | command | command

**Day 2 : 10/19/20**

\* Unix Command line

Given a file, say employee.csv, containing data in the following format

empid,initials,department,leave\_available

1000,KK,CTO\_OFFICE,12

2001,MA,HEXAVARSIT,8

1001,IK,CTO\_OFFICE,9

2002,UM,HEXAVARSIT,7

1002,SK,CTO\_OFFICE,13

2003,VR,HEXAVARSIT,6

2004,JK,HEXAVARSIT,6

\* Give an unix command which returns the record with the maximum leave\_available

\* In the above case, the output should be

1002,SK,CTO\_OFFICE,13

$ --- > bash shell

% ---🡪 C shell

echo $SHELL

/bin/csh

/bin/bash

cat /etc/shells

\* Give an unix command which returns one row per department - department, sum of leave\_available of all employees in that department

\* In the above case, the output should be

CTO\_OFFICE,34

HEXAVARSIT,2­­7

**Day 3 :**

simple if

case (switch statement)

1: create the file : customer.txt

If file present don’t create else create it.

2: add customer info cusid,custname,age

3: display all customer details.

4: display specific customer details using custId

5:

**3 days (HTML/CSS/JavaScript)**

https://[www.google.com](http://www.google.com) URL : Uniform resource locator

http : hyper text transfer protocol (secure)

www: world wide web

google : domain

com : commercial

------http/https(req)--------------------🡪

Client Server

🡨------http/https(res)------------------

Html/html5

Css/Css3

JavaScript (JS)

Validation using

JavaScript

HTML5 Features

HTML : hypertext markup Language which help to create web pages.

Web pages help to display the contents in different format like bold, italic, clips etc

HTML is use to create static as well as dynamic web page.

HTML provided lot of pre-defined tags (elements)

Syntax

<tagName> opening tag

</tagName> closing tag

<tagName/> self closing tag

Html tags

1. Html
2. Head : meta – data (data about data)
3. Body : actual contents to display on web page.
4. P (paragraph tag)
5. Br (break tag) : it doesn’t contains closing tag
6. Heading tag (6 types start from h1(largest) to h6(smallest))
7. b (bold)
8. i (italics)
9. u (underline)

Attribute : Attribute is known as properties of a tags.

Syntax

<tagName name1=”value1” name2=’value2’ name3=value3></tagName>

P and heading tag attribute

<p align=’left/right/center/justify’></p>

<h1 align=’left/right/center/justify’></h1>

Font tag : This tag is use change color, face(style) and size.

Image tag :

<img src=”imageName.jpeg/gif/” />

Hyperlink tag : This tag is use to connect external web page as well as point

to specific para(contents) within a same web page.

2 types

1. External hyperlink
2. Internal hyperlink (bookmark)

External hyperlink

<a href=”pathOfPage”>Text</a>

a – anchor

href – hyper reference

Add the images

**List tags:**

It is use to display the items

1. UnOrder List
2. Order List
3. Definition list

**Table Tag :**

Employee Details

|  |  |  |
| --- | --- | --- |
| **Id** | **Name** | **Salary** |
| 100 | Ravi | 12000 |
| 101 | Seeta | 14000 |
| 102 | Meeta | 16000 |

Form Tag :

Syntax

<input type=”text/password/radio/checkbox/button/submit/reset/file” />

Query Param :

url?key=value&key=value&key=value

Get : By default every form method.

Data will send through url using query param concept.

We can send maximum 256 character data.

Performance fast.

Post : we have write method=”post” in form tag

Data send through body part of http protocol.

Data secure and we can send huge data.

Performance slow compare to get methods.

Get/Post/Put/Delete : But html /html5 doesn’t support put and delete method.

Get : Get the Resources ie employee, customer, product

Post : Create the Resource ie employee, customer, product

Put : Update the Resources ie employee, customer, product

Delete : Delete the Resources ie employee, customer, product

**Day 4 :**

Html 4

.xhtml (document type definition )

<!doctype public url=”…………………………..dtd”>

Html 5

<!DOCTYPE html>

VSCode (Visual Studio) : UI training (angular / react )

.net

Web Page

3 parts

1. Contents : HTML/HTML5 (Basic Action using submit and reset)
2. Presentation : Look and Feel : CSS/CSS3
3. Action : JavaScript

CSS : Cascading Style sheet :

With the help of CSS we can apply good look and feel (formatting style for the contents).

We can achieve **separation of concern** : Contents separate and formatting style.

CSS 3 types

1. Inline CSS
2. Internal CSS or embedded CSS
3. External CSS

Inline CSS

Syntax

<tagName style=”property:value;property:value;”></tagName>

Internal CSS or embedded CSS

Syntax

In head

<style>

Selector {property:value;property:value;}

</style>

Types of Selectors

1. \* universal selector

\*{color:green;}

1. Specific selector

tagName {property:value}

1. Multi selector

tagName, tagName {property:value}

1. Class selector (Local class selector)

tagName.className {property:value}

1. Global class selector

.className {property:value}

1. Id selector

#idName{property:value}

Class selector Vs Id selector

Class : groups of the tag

Id : unique for that tag

DOM : Document Object Model

**JavaScript:**

JavaScript was object based interpreter scripting language. Which help to do client side validation as well as to create dynamic effect for the web page.

JavaScript using ES5 Features

ECMAScript : It is a concept. And JavaScript is a implementation of ES5.

Object Based Vs Object Oriented

Class, object, Encapsulation, Inheritance, Polymorphism and abstraction.

JavaScript is object oriented interpreter scripting language from ES6 onwards.

All browser doesn’t support ES6 all features.

Interpreter

Compiler

Both are translator : converting one format to another format.

Compiler convert all code at time where interpreter convert line by line.

Syntax (script tags)

<script type=”text/JavaScript”> opening tag

</script> closing tag

This tag must be in between head or body or within any html tags.

Variable : variable is a name which hold some value.

Value will change during the execution of program.

JavaScript is loosely data types.

int a=10; //C or C++ or Java

To declare the variable in JS we have keyword as **var**

Syntax

var variableName;

DataTypes

number

string

boolean

object reference

undefined

etc

primitive data types : it is use to store only value.

Syntax to create the memory of pre-defined or user-defined objects

var referenceName = new ObjectName();

var obj = new Date()

var obj = new String();

var obj = new Number();

Operators:

Arithmetic Operator :

+, -, \*, /, %(remainder)

Relation Operator

>, >=, <, <= , ==, !=

Logical Operator

&& || !

Assignment Operator

=

Increment and decrement operator

++ , --

++ increment the value by 1

--decrement the value by 1

Pre-increment and post increment

Pre-decrement and post decrement

++n; increment and store or assign

n++; assign or store and then increment

Ternary operator

Condition ? true : false;

===

if statement

1. Simple if

if(condition){

true block

}

1. If else

if(conditions) {

true block

}else {

false block

}

1. Nested if

if(condition) {

if(conditions) {

true block

}else {

False block

}

}else {

if(conditions) {

}

}

1. If ladder or if else if

if(conditions) {

}else if(conditions) {

}else if(conditions) {

}else {

}

switch statement

syntax

switch(variableName) {

case value:block1;

break;

case value:block2;

break;

case value:block3;

break;

default: wrongblock;

break;

}

switch, case, break and default are keywords.

Looping : it is use to execute the statement again and again till the conditions becomes false.

While loop

Do while loop

For loop

**functions :**

set of instruction to perform a specific task.

1. Pre-defined function
2. alert(“Msg”); This function is use to display alert or popup message on web page.
3. prompt(); This function is use to receive the value through keywords.
4. eval() : It is use to convert string to number
5. confirm : This popup contains two button ok and cancel

If user click ok then it return true else return false.

1. User-defined function

Do

1: Add , 2 :Sub : alert

: prompt

Switch statement

1 : Addition of two number

Alert to receive the value of a and b

eval : convert string to number

2: Subtraction of two number

Alert to receive the value of a and b

Confirm (to do the another operation)

While

**HTML5 : Few forms**

**CSS**

**JavaScript**

**Day 4 :**

user-defined function

syntax

function functionName(parameterList) {

}

1. function no parameter and no return type

2. function passing parameter and no return type

3. function no passing parameter but return type

4. function passing parameter and return type

ES6 React JS

Events : Events is interaction between user and html components.

It is delegation model.

Types of Events

In JavaScript all events start with on\*

like

onClick

onDblClick

onMouseOver

onMouseOut

onKeyUp

onKeyDown

onSubmit

onBlur

onFocus

onChange

etc

Event is provide bridge between html and JavaScript

DOM : document object model

DOM is a api(application programming interface)

which provide set of method and properties which help to read, write and

update html contents dynamically.

JavaScript objects :

In JavaScript object are divided into two types

pre-defined objects.

object : any real world entity.

JavaScript internally follow object hierarchy.

object ---> property (state) ---> have - varialbes

behaviour --------->do/does - functions

object

property (variables)

behaviour (functions)

object

property

behaviour

object

BOM : Browser Object Model

DOM : Document Object Model

user-defined objects.

Interval Functions

setInterval()

setTimeout()

clearInterval()

Day 5 :

**Box Model :**

div{

    border-style: groove;

    border-width: 1;

    border-color: red;

    width: 200px;

    height: 300px;

}

div{

    border: 2px solid red;

    width: 200px;

    height: 300px;

}

Position : Relative ; we can use top, left, right and bottom properties for that tag

Position : Absolute : We can’t top, left, right, bottom this property

But user can decided where you want to display that tag base upon the event.

Position : Fixed

**Database**

Copy OJDBC jar from here: H:\common\Trainee\_2020

<< OLE Object: Picture (Device Independent Bitmap) >>

The userids are train1-20  the password for **train1**is ‘**pitchers1**’  for

train2 the password is ‘pitchers2’, etc.

   The tnsnames entry you’ll need is below.

INDIATRN =

  (DESCRIPTION =

    (ADDRESS = (PROTOCOL = TCP)(HOST = [indiaoracletraining-dev-oracle-rds.c2zuiscfni9y.us-east-1.rds.amazonaws.com](http://indiaoracletraining-dev-oracle-rds.c2zuiscfni9y.us-east-1.rds.amazonaws.com/))(PORT = 1521))

    (CONNECT\_DATA = (SID = INDIATRN)))

Username: train1

**Database : (Oracle ) -- > SQL / PLSQL Using Oracle 5 days**

**SQL -- > 3 days**

**PlSQL 🡪 2 SQL**

**Data : Raw facts**

**Information : Processed Data or Meaningful data.**

**Database : Storing the data and information in proper or common (tables) format.**

**Input : keyboard, initialization , file, database or through network**

**Process : business rules.**

**Output : console, storing in file, database, through send to network.**

1. **File**
2. **Database**

**File base system**

1. **We can store data permanently.**
2. **We can store huge data.**
3. **We can apply security for data (read, write or execute)**

**Limitation of file base system**

1. **Data redundancy (means storing same data again and again) (Duplicate records)**
2. **Data inconsistency (format of the file).(txt, doc, xsl, pdf, etc)**

**.txt (delimiter for each records as next line or / or , or tab space)**

**.txt(delimiter for each data**

**Emp.txt**

**Id,name,salary**

**IdNameSalary**

1. **Security (Read or Write mode (Execute shell scripting or batch file))**

**Database : Tables Format (Table format)**

**DBMS : Database Management System : It is a software which help to store the Data in the table format like columns and rows.**

**Excel Sheet. DBMS**

**VB (Visual Basic ) with Excel**

**Database Model :**

**HDBMS : Hierarchal Model**

**NDBMS :**

**RDBMS : Relation DBMS (Database management system)**

**1970**

**Dr. EF Codd’s Rules : 12 Rules – 0 to 11**

**The Database which support all 12 rules which provided by EF Codd’s rules**

**RDBMS : Relational Database Management System**

**RDBMS Databases**

**Database Name Company**

**MySQL Sun MicroSystem (Oracle)**

**Oracle Oracle**

**SQL Server Microsoft**

**2019, 2020**

**Db2 IBM**

**SQL : Structure Query Language**

**SQL Developer tools**

**Commands (CLI )Command line interface.**

**80% to 90%**

**SQL : Five types (Sub types )**

1. **DQL(Data Query Language) or DRL(Data Retrieval Language) (View Records)**
   1. **Select Clause** 
      1. **Select all records**
      2. **Select specific records**
      3. **Select with where clause**
      4. **Select with group by clause**
      5. **Select with having clause**
      6. **Select with order by**
      7. **Select with join**
      8. **Select with sub query**
      9. **Select with union operator**
2. **DDL (Data Definition Language) (table structure )**
   1. **Create**
   2. **Drop**
   3. **Alter**
   4. **Rename**
   5. **Truncate**
3. **DML (Data Manipulation Language) (work on data )**
   1. **Insert**
   2. **Delete**
   3. **Update**
4. **TCL (Transactional Control Language)**
   1. **Commit**
   2. **Rollback**
   3. **Savepoint**
5. **DCL (Data Control Language)** 
   1. **Create the user**
   2. **Grant the permission to the user**
   3. **Revoke the permission from the user**

**View**

**Index**

**Sequence**

**SQL :**

**PlSQL :**

**MySQL/ SQL Server / Db2 --🡪**

**username : root**

**password : \*\*\*\*\*\***

**Oracle :**

**Username : scott**

**Password : tiger**

**Sql server**

**Username : sys**

**Password : \*\*\*\***

**NoSQL**

**MongoDB**

**MySQL/ SQL Server / Db2 --🡪**

**show databases; This command is use do display the database.**

**use databaseName; This command is use to move the specific database.**

**Database : database is a collection of tables or views etc.**

**show tables; This command is use to display all tables present in existing database.**

**create database databaseName; This command is use to create the database.**

**Above four command are invalid in oracle database.**

**username itself is a database in oracle database.**

**system**

**scott**

**admin**

**oracle**

**hr**

**select \* from dual;**

**select \* from tab; : tab is a pre-defined table provided by oracle databases which help to display all pre-defined as well as user-defined tables table in that account.**

**Oracle eXpress Edition : small database. It support basic feature of oracle database.**

**Oracle enterprise edition : it support all features of oracles.**

**ORDBMS**

**Day 7 : 27-10-20**

**DBMS : Database Management system**

**RDBMS : Relational Database Management System**

**DBMS 🡪 Table, Columns , Rows**

**RDBMS -🡪 Relation, Attribute , Records (Tuple)**

**Trainer\_Student**

**TId TName Tech Sid SName Age**

**1 Raj Java 101 Seeta 21**

**1 Raj Java 102 Reeta 22**

**1 Raj Java 103 Meeta 23**

**2 Ravi C/C++ 104 Keeta 24**

**2 Ravi C/C++ 104 Teeta 25**

**Trainer**

**PK(Primary Key): doesn’t allow duplicate as well as null value.**

**TId TName Tech**

**1 Raj Java**

**2 Raj Java**

**3 Ravi C/C++**

**Students**

**PK FK(Foreign Key)**

**Sid SName Age TS\_Id**

**100 Seeta 21 1**

**101 Meeta 22 1**

**102 Keeta 23 2**

**103 Teeta 24 3**

**104 Leeta 26 null**

**FK is use to refer the primary of same table or different table. FK allow only those records(values) which present in primary key. It allow null value.**

**SQL : Structure Query Language**

1. **DRL or DQL (Data Query or Retrieval Language)**

**MySQL/SQL Server / Db2**

**Create database mydb;**

**Use mydb;**

**Show tables;**

**Scott : is database**

**Select \* from tab;**

**Select \* from tableName;**

**This command is use to display all records from that table**

**Table structure**

**desc tableName;**

**Filter the columns**

**Select columnName, columnName, columnName from tableName;**

**Columns alias**

**Select columnName as columnAlias, columnName columnAlias from tableName**

**select employee\_id as id,first\_name||' '||last\_name Full\_Name,salary,salary+5000 as Gross\_Salary from employees;**

**Employee\_Id,Full\_Name, BasicSalary, HRA, DA,PF,Gross\_Salary**

**Salary = 10%**

**DA = 5%**

**PF = 7%**

**GrossSalary = Salary + HRA + DA – PF**

**Filter records using Where clause**

1. **Relational Operator**

**>, >=, <, <=, = (equal), != or <>**

**Syntax**

**Select \* from tableName where columName RO value;**

**Select columName, columnName from tableName where columName RO value**

**Select \* from employees where salary > 15000;**

**Select employee\_id,first\_name from employees where salary > 15000;**

**Select employee\_id,salary from employees where first\_name =’Steven’;**

**select first\_name,job\_id,department\_id from employees where department\_id <> 90;**

**MySQL default date format is yyyy-mm-dd**

**Oracle default date format is dd-mon-yy**

**select first\_name,salary from employees where hire\_date ='14-Jun-97';**

**select first\_name,salary from employees where hire\_date > '31-Mar-95';**

1. **Between operator (Numerical and Date value)**

**Filter the range of records**

**Select \* from tableName where columnName between min and max**

**select first\_name from employees where employee\_id between 100 and 150;**

**select first\_name,salary from employees where salary between 10000 and 17000;**

1. **In operator (more then on specific)**

**Select \* from tableName where columName in(v1,v2,v3)**

**Value number then write directly if value are alphanumeric or date then write in single quote.**

**select first\_name from employees where employee\_id in(100,110,105,150,1000);**

**select first\_name,job\_id from employees where job\_id in('ST\_MAN','IT\_PROG');**

1. **Like operator (Specific only one records)**

**Select \* from tableName where columnName like value;**

**select employee\_id,salary from employees where first\_name like 'Steven';**

**select employee\_id,salary from employees where first\_name = 'Steven';**

**select employee\_id,first\_name,salary from employees where first\_name like 'S%';**

**Start with S Character**

**select employee\_id,first\_name,salary from employees where first\_name like '%n';**

**end with s character**

**select employee\_id,first\_name,salary from employees where first\_name like '%r%';**

**contains r character**

**% zero or one or many**

**select employee\_id,first\_name,salary from employees where first\_name like 'S\_e%';**

**Start with S, then 2nd character may be anything, 3rd may be e then one or more any character.**

**\_ any one single character**

1. **is null :**

**select first\_name,salary,commission\_pct from employees where commission\_pct is null;**

1. **logical and, or, not**
2. **select \* from tableName where columnName op value and columnName op value (both the conditions must be true)**
3. **select \* from tableName where columnName op value or columnName op value (any condition must be true then we will get the records)**

**select first\_name,salary from employees where salary > 10000 and department\_id=90;**

**select first\_name,salary from employees where salary > 10000 or department\_id=90;**

1. **not**
2. **not between min and max**
3. **not in (v1,v2,v3)**
4. **not like value**
5. **is not null**

**Order by clause ( it is use to display the records in ascending or descending order)**

**select first\_name, salary from employees order by salary asc;**

**select first\_name, salary from employees order by salary;**

**select first\_name, salary from employees order by salary desc;**

**Multi sort (Order by clause )**

**select first\_name,department\_id,salary from employees order by department\_id asc,salary asc;**

**Functions**

**Function is use to write the set of instruction to perform a specific task.**

**Oracle**

**Dual**

**Select \* from dual;**

**2 types**

**All function takes one or more than one parameter and return the value. ( it must return the values).**

1. **Pre-defined function**

**Two types**

1. **Single row function : The output or return type apply for every records individually depends upon the function.**
2. **Character function**

**select upper(first\_name) from employees;**

**select upper('raj') from dual;**

**select upper('raj'),lower('RAJ'),initcap('raj') from dual;**

**select concat(first\_name,' ',last\_name) from employees; (it takes only two parameter)**

**select concat(first\_name,' ',last\_name) from employees;(In MySQL database it takes n parameter)**

**nested function**

**select concat(first\_name,concat(' ',last\_name)) from employees;**

**(nested function, first inner function execute, inner function output is input for outer functions).**

**or**

**select first\_name|| ‘ ‘ ||last\_name from employees**

**( it doesn’t support in MySQL)**

**Select substr(content,start,numberOfChar) from dual**

**select substr('rajdeepkumar',4) from dual;**

**select substr('rajdeepkumar',4,4) from dual;**

**select length('Raj Deep') from dual;**

**select trim(‘ Raj Deep ‘) from dual; help to remove the space before and after**

**select length(trim(' Raj Deep ')) from dual;**

**Number function**

**round()**

**trunc()**

**Date function :**

**Sysdate**

**Months\_between(newDate,oldDate)**

**select months\_between(sysdate,'01-Jan-20') from dual;**

**add\_months(sysdate,3)**

**select add\_months(sysdate,4) from dual;**

**select next\_day(sysdate,'Sun') from dual;**

**select last\_day(sysdate) from dual;**

1. **Display all employees first\_name and numberOfYearOfExp from employees tables.**

**Hire\_date (**

**20 to 30 year**

**Remove decimal number but trunc**

1. **YearOfExp more than 25 years**

1. **Multi row function or aggregate function : The output or return type apply for group of records depending upon the group by clause. (if we doesn’t use group by clause we will get only one output for multi row function if the table contains one or more than one records).**
2. **User-defined function (Pl SQL )(Stored Procedure and functions)**

**Record filter**

**Where clause**