**20-09-2021**

**Version Control System : Version control system that records changes on files or program or application in a projects.**

**3 types**

**Local Version control : RCS : Revision control system**

**Centralized version control : SVN**

**Distributed Version control system : Local repository and remote repository.**

**Git : Git is distributed Sub Version control system which help to manage the source code.**

**Distributed version control system keeps track of software version and allow many developers to work on given project within a maintaining connection of common network.**

**Git is a open source distributed version control system.**

**Create one folder My Repository**

**Please create simple text file or any type of time with some contents.**

**Open terminal in Virtual machine.**

**git --version**

**to make normal folder as a local git repository we have to**

**run the command as**

**git init : after run this command it will create .git folder.**

**This folder consider as a hidden folder in Unix or mac**

**git status :This command is use to check the last command status.**

**git add filename This command is use to add the file from local file system to staging area.**

**Staging area : it is a area generally represent in git directory, that store information about what will go to next commit.**

**It is a intermediate area between os file system and git local repository.**

**git commit –m “First commit”**

**all commands**

**git init**

**git status**

**git add filename**

**or**

**git add . : This command is use to add all files and folder**

**git status**

**git commit –m “message”**

**first this command**

**git config –-global user.email “akash300383@gmail.com”**

**second this command**

**git config –-global user.name “Akash”**

**No do the change in same file**

**Remote repository**

**Github is type of remote repository which help to share the data from one developer to another developer.**

**AWS : code commit**

**Gitlab**

**Azure :**

**So first create the account in github**

**Then create the repository.**

**To link local repository to remote repository we have to run the command as**

**Git remote add origin URL**

**git remote add origin** [**https://github.com/Kaleakash/Java\_FIS\_2021\_Batch.git**](https://github.com/Kaleakash/Java_FIS_2021_Batch.git)

**after connect local to remote**

**we have push local repository code to remote repository**

**before push we have to check default branch**

**git branch**

**master/main**

**git push –u origin master**

**or**

**git push –u origin main**

**git branch :**

**git branch is use to hold more than one commit details.**

**Branch is like a pointer which hold more than one commit.**

**Default branch name is master/main**

**git branch (master/main)**

**to create the user-defined branch**

**git branch branchName**

**command to switch to user-defined branch**

**git checkout branchName**

**To delete the branch**

**git branch –D branchName**

**merge the code**

**git merge branchName : This command is use to merge to code to current branch**

**create folder**

**then create the file**

**then git init**

**then git add .**

**git commit –m “message”**

**Syntax**

git remote add origin https://token@github.com/Kaleakash/test\_info.git

**To Generate token**

****

****

****

****

****

****

git remote add origin <https://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@github.com/Kaleakash/test_info.git>

after added url to origin variable we can push the data to remote repository

git push –u origin master

git remote remove origin

Java Training

**This command is use to download the new remote repository code in local machine**

**git clone https://github.com/Kaleakash/Java\_FIS\_2021\_Batch.git**

**After clone move inside a repository folder.**

**This command is use to pull new update from remote repository to local repository.**

**git pull**

**Java Training**

**What is Java.**

**Java is a platform independent and pure object oriented programming language.**

**C 1970**

**C++ 1980**

**Java 1990 :**

**Initial name of is Oak. 1991**

**Rename in Nov 1995 to Java.**

**James gosling and Team**

**Java was belong to Sun micro system but not it is a part of Oracle.**

**Version of Java**

**1.0 to 17**

**Java 8 mandatory to develop the application.**

**object : any real world entity.**

**Properties or state 🡪 have-🡪 fields / variables.**

**Person**

**Behaviour -🡪do/does -🡪 function / methods**

**Place**

**Bank**

**Animal**

**Car**

**class : blue print of object or template of object.**

**Class syntax**

**class classname {**

**fields;**

**methods;**

**}**

**In Java class name must be follow Pascal naming rules.**

**If it contains one world first letter must be upper case. If it contains more than one world each world first letter upper case.**

**Demo.java**

class Demo {

    public static void main(String args[]){

        System.out.println("Welcome to Java");

        System.out.print("Welcome");

        System.out.printf("Welcome to Java");

    }

}

**Data types : it is a type of data which tell what type of data it hold.**

**2 types**

1. **Primitive data types : it is used to store only value** 
   1. **byte 1 byte**
   2. **short 2 byte**
   3. **int 4 byte**
   4. **long 8 byte : without decimal**
   5. **float 4 byte**
   6. **double 8 byte :with decimal**
   7. **char 2 byte :any singe character**
   8. **boolean 1 bit : true or false.**

**Primitive data type example**

class Demo {

    public static void main(String args[]){

        int a=10;

        System.out.println(a);

        System.out.println("Value of a is = "+a);

        System.out.printf("Value of a is = %d\n",a);

    }

}

**Type casting :converting from one data type into another data type is known as type casting.**

**2 types**

1. **implicit type casting**
2. **explicit type casting**

**int family**

**------------------------implicit -------------🡪**

**byte short int long**

**🡨-----------------explicit ---------------------**

**Type casting example**

class Demo {

    public static void main(String args[]){

        byte a =10;

        short b =a;     // implicit type casting

        System.out.println(a);

        System.out.println(b);

        short c = 10;

        // (type)variableName;

        byte d = (byte)c;       // explicit type casting

        System.out.println(c);

        System.out.println(d);

    }

}

**Type casting int and float variables**

class Demo {

    public static void main(String args[]){

        int a=10;

        float b=a;      // implicit type casting

        System.out.println(a);

        System.out.println(b);

        //float c = (float)10.10;

        float c = 10.10f;       // explicit type casting

        int d = (int)c;         // explicit type casting

        System.out.println(c);

        System.out.println(d);

    }

}

**Operator :**

**If statement**

**If else**

**Nested if**

**If else if**

**Switch statement**

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

**Initialization : start and end**

**Condition : true**

**Coding**

**Increment or decrement.**

**While loop**

**Do while loop**

**For loop**

**Looping Example**

class Demo {

    public static void main(String args[]){

        // System.out.println("While loop");    // entry loop

        // int i=1,n=10;

        // while(i<=n){

        //     System.out.println(i);

        //     i++;

        // }

        // System.out.println("Do While loop");    // exit loop

        // int i=1,n=10;

        // do{

        //     System.out.println(i);

        //     i++;

        // }while(i<=n);

        System.out.println("for loop");

        for(int i=0,n=10;i<=n;i++){

            System.out.println(i);

        }

    }

}

**In java every decimal number by default consider as double.**

1. **Non primitive data types or reference data types: it is used to store value as well as reference of another data types.** 
   1. **Array**
   2. **Class : pre-defined or user-defined**
   3. **Interface : pre-defined or user-defined**
   4. **Enum**

**array : array is used to store more than one value of same types.**

**syntax**

**datatype arrayName[];**

**for each or enhanced loop**

**for(datatype variableName : arrayName) {**

**}**

**Array with looping (for loop and enhanced loop)**

class Demo {

    public static void main(String args[]){

        int []abc;

        int []num = {10,20,30,40,50,60};

        System.out.println("Value of 0 position in num "+num[0]);

        System.out.println("Value of 1 position in num "+num[1]);

        System.out.println("using for loop");

        for(int i=0;i<6;i++){

            System.out.println(num[i]);

        }

        System.out.println("for enhanced loop");

        for(int n:num){

            System.out.println(n);

        }

    }

}

**Creating the memory size for the array**

**datatype arrayName[]=new datatype[size];**

**GC()**

class Demo {

    public static void main(String args[]){

        int []abc={10,20,30,40,50};

        int []num = new int[10];

        System.out.println("Size of array is "+abc.length);

        System.out.println("Size of array is "+num.length);

        System.out.println(abc[0]);

        System.out.println(num[0]);

        System.out.println(num[1]);

        int temp =100;

        for(int i=0;i<num.length;i++){

            num[i]=temp;

            temp++;

        }

        for(int i=0;i<num.length;i++){

            System.out.println(num[i]);

        }

    }

}