List p an Interface under list they are two types those are

1) Array list (c)

2) (inked list-(c)

The loops used In the list are

1) for

2) for each

3) Java-8

4) Iterator. hasnext

Stemove

List-using Arraylist:

-> Java arraylist class can contain duplicate elements

Java Array Ust class maintains Insertion

-7 Java Arraylist class Js non Synchronized.

-> Index Jo maintained.

Syntax: Arraylist < Integer > al.

= new Arraylist < Integer > ();

Array list; public class Array list Example & public static void main (string & Args []) { Array List < string > Dist = new Array List < string> List add ("Mango"); list. add ("Banana"); list add ("cherry"); list add (" Jackfruit"); System out print In (list); output: Mango, Banana, Cherry, Tackfruit. ziArry cist using Iterator: public Clan Array List Example 12 -public Static - vold main (String Args[7) } Amylist < string > list = new Amylist- 4string > (1); List add L"mango" /; list add ("Banana"); list add ("cherry"); List add (" Tack fuil"); Iterator iterator = me cist genterator () while City hasnex E (1)) & TIF System out print in city nent (13)

3) Anaylist using for cook loop: public class Arraylist - Example 2 & public static void main (string() args) Arraylist < string 7 listz new Array Ust- < string. tist-add ("mango") List-add ("Banana") List-add ("cherry") list-add (" Jack pruit) fol Cinti=o; i < list size(); i++) } System. out-print in (accord list-get (1)); The court party the second Prophic Clar Away ust Cramplers output: Mango Banana, cherry, Jacksuit 4) Arry list using bleach loop? public clar Arraylist Example 35 public static roid main (string [7 args) } Array list < string 2 (ist) = new. Arraylist < string > to de contest of Delica,

(ist. add ("mango"); Though the list add I" Banana"; forthe class straig list-add (" cherry"); ~ (list) add (" Tack feuil-"); for (string (i): (profit) { system out print In (i); (("layom")) 5) list using winked list 1 500 1 100 -> Allow duplicates -7 Allow Null values -7 Allow Juscation older. 2 Thodram :public Clars Tyo & good dono rol groze public Static void main (string[] Args) 5 Ginked list - < string > list = new linked list <string 7(); list add ("Tyo"); list add ("mouni"); (ist add ("Rachema") System out print in (list)

Christa telloop; public class Tyof public Static void main (String [] args) Linkedlist < string > l = newlinkedlist < string> ' lode" Tyo"); 2. lad ("mouni"); l. (Rachana"); Por Cintizo; iEd. size(); 14+) System. out print In (); Jusing for each loop: public class Fos public static void main (string [7] args) Linked list < string 7 l = new Cinked list < string >(); l. add (Tyo"); I add ("mouni"); 1. add (Rachara");

HOLDER Egeland out point (4); For (string str: 1). System. out. print (str + ""); 2) using Iterated: public Class Tyof public static void main (string[] angs) } Cinked list < string > l = new linked List < string > (); ladd ("Fyo"); l. add ("mouni"); I. add ("Rachana"); Iterator : iterato = liniced list- il-erator (): while Citerato has next ()) } System. out print in Citerator. next (1). system. The grain () let may we so

Set: - sel- jo an joter under sel-They are : nHash set-cc) -> Linked hashse 2) Stilled sel-Ci) -7 Treeset. Hashset: -Sava-8 each loop public class public static void main (string[] angs) Set < string 7 l = new Hashselt < 7(); l. add ("Java"); l. add ("python"); ("and sold") Dadd (" spring boot"); soften Coute prent dué et sour d'Ale) System. out print (Kanquage);

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10 Steratol:
  public class of
 public static void main (string [ ] args) 5.
 set < Integer > number = new Hash set < > ();
 number add (12);
 number, add (14); gener
 number, add (13);
Therato < Integer 7 iterate = number-iterator();
  System.out. print in (" Iterating over set:").
  while (iterate. hasNext-()) ?
  System. out-print (ilerale, next-()+",");
1) Go each: - public class ?
  public static void main (string[ ] augs) (
 Set < string > 5 = new Hash set <>().
    ·s. add ("Tyo");
    S- add ("mouni");
        add ("Nikhii");
   S. Foleach (System. out: printin);
```

linked Heish set? - (for-each) public class \$ \$ \$70 \$ public static void main (string [7 args) { linked Hash set < string - jyo = new linked Hashset < string() Jyo. add (" (avemi")) iyo add ("naidu"); jyo. add ("Hima"); for (string itn : jyo)s System. out. prontly (ite); Sterating Lin Iceal Hash sel Jteratol: public class \$ 50 5 public slatic void main (string [] args) { Linked Hash Sch < string > S = new Linked Hash sel-< shing(); S. add ("(aumi"); s. add ("Naidu"); add ("Hima") Iterator. iterator = S. iterator (). while (its. has Next ()) } system. out. printen libr. next (1);

Java-8 (fol each) public Clar Tyos public static void main (string [7 args) s Linked Hashset < string > s= new Hashset < string> s. add (" Coverni"); s. add (" Naidu"); S.add ("Hima"); Sisheam (). foreach (8ystein out : " print In); (15) 85 ted se tree set ! - 1 (Heratol): public class solded selpublic static void main (string [7 args) solled set < shing > set = new Treeset < shing > (); set add ("welcome"); Set add ("To"); Set-add ("parvathipuram"). set add (115" Sy stempmint in (1 sorted set: "+ se (-); MaratoT. iteratol = Set. iteratol systempret. mint In ("ilerate");

while (value. has next ()) } system. out. print-In Cralue. next (1); map: - map Js an Interface classified Into two types. Littled Heish map (c) sorted mapar > Tree map Hash Table (c) Concorrency Hash map (c) Hash map cising Entry set: class gleration governo public static void main (string (7 args map Entryset (); Map < string. string >> = new Hashmap put ("Fyothera" "parvathipuram"): pul- (" mouni" "Devarapalli"); v. put (" Rachema" & "Narsi patnam") For (map. Entry < string > entry: v. entry System but print in (1) kay = "+ entry get key

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17/81 each: -
  public class &
  public static void main ( string [] args).
  Map < string. string > map= new Hashmap < string.
                             shang 7 ();
 map pul-(" Jyo" " pvp");
 map.put (" mouni" Devarapalli")
 map. put ("Rachana" "Analoupalli");
  Set < map. entry < string, string >> = map. entryset();
map. foleach ((K,V) -> system. out-print-
  In (" key = "+K+", value = "+V) ];
 map: -
         Set < string > 1 = noew Keysel- 177;
Keysel-:
 Entryset: - set < map. entry < string, string >7
                                   map. Entry set ();
 using forloop: -
      system out printin ( ref. get key + "="+
                                     Tref get value);
       System. out print in (ref. get 100y())
```

```
Heratol for map ?
Iteratol < map. Entry < string, string > 7itr
                    = map. enbryset(). iteration
  while (its. hasNext())
        product to be a galax product of mich 2 to he
 set < map. Entry < string > 7 entry = itsinlexte.
  map. Entry < string, string > key value = 91ef. next
 System.out: print In (key value get key()+"==="
                    + Keyvalue get value()
Exception:
               Object-
              Throwable
                           exceptions
                         unchecked
                                         Checked
                         9: - Runtime.
                                        Eg: -Io (8)
                         (87) null point-
                                        Compile
                           Blaption
                                         time
                                         Excepting
```

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example: -
public class Tyo. S
 public Static void main (string[] Args)
 Tyo Example. example = new Tyo Example ();
 int v=0;
 try ?

j = example. divi(i:10; j=1);
   catch (Exception.e)
    e. print-stack brace ();
    System out print In (+j);
 public int divi (inti, inti) throws becepting
  int- K= 1/j;
  neturn K;
```