Design pattern

Collection Framework

File Handling

Regular Expression

File Handling :

Where it is used

Main use

Create the file using different methods.

Advantage

Ecrypty and decrypt

Why file handling if database is present.

Storing the data file

File handling main advantage.

Input

Process

Output

File system

Database system

Io package provided set of classes and interfaces which help do byte wise as well as character io operation.

Data

byte char

Input Output Input Output

InputStream OutputStream Reader Writer

DataInputStream DataOutputStream InputStreamReader, OutputWriterWriter

FileInputStream FileOutputStream , FileReader, FileWriter

BufferedInputStream BufferedOutputStream BufferedReader, BufferedWriter

PrintStream PrintWriter

ObjectInputSteram ObjectOutputStream

Input : keyboard, File, database, networking, etc

Output : Console, File , database, networking, browser.

System.out.println();

Ps.println(“Welcome to Java ”);

System.out;

System.out is behave like a PrintStream class reference.

PrintStream ps = System.out; System.out is refer to standard output device.

Console or monitor.

InputSteram is = System.in; System.in refer to standard input device. Keyboard

Scanner obj = new Scanner(System.in);

Object serialization : storing the object state or object itself in external file is known as object serialization.

Property id,name,salary

Behaviour dis

Identity emp

Regular Expression

Methods

What is regular expression

Usage

What is real use

Advantage

Qualifiers

Regular Expression : it is use to help describing a pattern text.

Regular expression is use to do the validation in client scripting language.

Java.util.regex.\*;

Pattern and matcher :

Pattern it is type of regular expression class which doesn’t provide constructor we have to take the help of compile method to create the reference of pattern.

Matcher : it is type of regular expression class which doesn’t provide constructor we have to take the help matcher method to create the reference.

. any charade

\d any digit

\D any character

\s white space

\w

\W

Break 15 min tea break

Collection Framework like a Data Structure.

Why need lot of classes and interfaces.

Searching and sorting

Framework

Synchronized (multithreading)

Sorted and unsorted

Null and not null

Data Manipulation

Different methods

Array list not synchronized meaning

Map is under collection or not.

int a=10;

a=20;

a=30;

array

int abc[]; abc can hold more than one value of type int.

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

structure

struct Emp {

int a;

char name[10];

float salary;

};

class : class is advanced of structure.

class Employee {

int a;

String name;

float salary;

void dis(){}

void read() {}

}

Employee emp = new Employee();

emp.id=100;

emp.name=”Ravi”;

emp.salary = 12000;

array object

int abc[]=new int[100];

Emloyee employees[]=new Employee[100]; zero object created of employee class.

employees[0]=new Employee();

employees[0].id=100;

employees[1]=new Employee();

employees[1].id=101;

employees[2]=new Employee();

employees[2].id=102;

employees[3]=new Department(); no

Collection Framework provide set of classes and interfaces which help to store the collection of object or elements of same type or different type. It provide set of methods which help to add, search, remove, iterate very easily.

Framework : framework provide set of classes and interfaces which internally connected to each others to perform a specific task. When we develop any application using any framework 70 to 80% task is taken care by framework. Framework also known as protocol or template but not final product.

Collection framework.

Util package

Collection -🡪 interface

Extends extends doesn’t extends

Set List Queue Map -🡪 interfaces

Set doesn’t allow duplicate

Few API under set maintain the order, unorder, sorted by default ascending

HashSet : unorder.

LinkedHashSet : order

TreeSet :

List : List allow duplicate and maintain the order using index position.

Stack

ArrayList

LinkedList

Vector : only one thread execute . slow in performance.

Queue : FIFO

PriorityQueue

Map : it store the information in the form of key – value pairs. Key is unique and value may be duplicate.

HashMap

LinkedHashMap

TreeMap

Hashtable : only one thread execute. Slow in performance.

Design pattern :