**TASK**

**1.Write the difference between checked and unchecked exception with example code.**

**A.** The main difference between the checked and unchecked exception is that the checked exceptions are checked at compile-time and these cannot be handled while unchecked exceptions are checked at run time and these can be handled.

**2.write the difference between throws and throw keyword in java?**

**A.** throws clause is used to declare an exception and throw keyword is used to throw the exception explicitly. The keyword throw is used inside method body to invoke an exception and throws is used in method declaration(signature). Throw is always followed by an instance variable and throws is followed by exception class names.

Example: void divide() throws ArithmeticException{

Throw new ArithmaticException(“sorry”);

}

**3.Write a note on nested try…catch block with example code.**

**A.** The try block within a try block is known as nested try block in java.

Example: **class** TryNested{

**public** **static** **void** main(String args[]){

**try**{

**try**{

     System.out.println("going to divide");

**int** b =39/0;

    }**catch**(ArithmeticException e){System.out.println(e);}

**try**{

**int** a[]=**new** **int**[5];

    a[5]=4;

    }**catch**(ArrayIndexOutOfBoundsException e){System.out.println(e);}

    System.out.println("other statement);

  }**catch**(Exception e){System.out.println("handeled");

}

  System.out.println("normal flow..");

 }

}

**4.Write a short notes on Multithreading and multitasking.**

**A.** multitasking is a process of executing multiple tasks simultaneously.We use multitasking to utilize cpu. Multitasking can be achieved in two ways:

**.** process based multitasking(Multiprocessing)

**.** Thread based multitasking (multithreading)

Multithreading is a process of executing multiple threads simultaneously.Multithreading is mostly used in games,animation etc.

**5.Write a short notes on Deque in Java.**

**A.** Deque is a interface and it is a subtype of Queue interface. Deque is related to the double-ended queue that supports addition or removal of elements from either end of the data structure .It can be used as a queue or a stack.

**6.Write a short note on generics.**

**A.**

**7.Write a short note on Map Interface.**

**A.**A map contains values on the basis of key i.e. key and value pair. Each key and value pair is known as an entry. Map contains only unique keys.

Map is useful if you have to search, update or delete elements on the basis of key.

**8.Write a difference between ArrayList and LinkedList.**

**A. 1.** ArrayList uses dynamic array to store the elements, LinkedList internally uses double Linekedlist to store elements.

**2.**Manipulation with ArrayList is slow because it internally uses array, Manipulation with LinkedList is faster than ArrayList because it uses doubly linked list.

**3.**ArrayList can act as a list,But LinkedList can act as both list and queue.

**4.**ArrayList is better for storing and accessing data, Linkedlist is better for manipulating data.

**9.Write a note on Dynamic array in java.**

**A.**A Dynamic array has variable size and allows elements to be added or removed.

**10.What is the purpose of the System class?**

**A.** System class is provided with useful fields pertaining to the environment.Standard input, output and error output streams are provided with System class.these are used to access the externally defined properties and environmental Variables. The system class can not be instantiated. The System class contains several useful class fields and methods.

**11.Which is the abstract parent class of FileWriter?**

**A.** OutputStreamWriter is the parent class of FileWriter.

**12.Which class is used to read streams of characters from a file?**

**A.** FileReader class is the one helps us to read the characters from a file.

**13.Which class is used to read streams of raw bytes from a file?**

**A.**FileInputStream read streams of raw bytes from a file.

**14.Write a difference between the FileInput stream and fileoutput stream,random access file.**

**A.** Java FileOutputStream is an output stream used for writing data to a file.If you have to write primitive values into a file, use FileOutputStream class. You can write byte-oriented as well as character-oriented data through FileOutputStream class. But, for character-oriented data, it is preferred to use FileWriter than FileOutputStream.

Java FileInputStream class obtains input bytes from a file. It is used for reading byte-oriented data (streams of raw bytes) such as image data, audio, video etc. You can also read character-stream data. But, for reading streams of characters, it is recommended to use FileReader class.

Using a **random access file**, we can **read** or write at any position within the **file**. An object of the RandomAccessFile class can do the **random file access**. We can **read**/write bytes and all primitive types values to a **file**.

**15.What is the difference between System.out, System.in and System.err?**

**A.**System.in is an InputStream which is typically connected to keyboard input of console programs.System.out is a PrintStream. System.out normally outputs the data you write to it to the console.this is also often used to print debug statements of from a program.System.err is a PrintStream.System.err works like System.out except it is normally only used to output error texts.

**16. Write a note on PreparedStatement and ResultSetMetaData interfaces with code snippets.**

**A.**The PreparedStatement interface is a subinterface of Statement. It is used to execute parameterized query. Example: String sql =”insert into student values(?,?,?)”;

The ResultSetMetaData is an interface which is useful beacause it provides methods to get metadata from the ResultSetObject.

Public ResultSetMetaData getMetaData() throws SQLException

**17.**