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**Java Programming**

**Lab assignment 06**

**27/11/2021**

**Java Program to Convert InputStream to String**

**Theory**: We can convert an InputStream object to a String in Java using different Java APIs as well as a 3rd-party library — Apache Commons IO. Such as;

1. Using InputStream.readAllBytes() Method
2. Using ByteArrayOutputStream Class
3. Using BufferedReader Class
4. Using Scanner Class etc

**Code:**

import java.io.\*;

public class InputStreamString {

public static void main(String[] args) throws IOException {

InputStream stream = new ByteArrayInputStream("Hello there!".getBytes());

StringBuilder sb = new StringBuilder();

String line;

BufferedReader br = new BufferedReader(new InputStreamReader(stream));

while ((line = br.readLine()) != null) {

sb.append(line);

}

br.close();

System.out.println(sb);

}

}

**Output:**



**Learning Outcome:**

In the above program, the input stream is created from a String and stored in a variable stream. We also require a string builder sb to create the string from the stream. Then, we created a buffered reader br from the InputStreamReader to read the lines from the stream. Using a while loop, we read each line and append it to the string builder. Finally, we closed the bufferedReader.

**Java Program to Convert a String into the InputStream**

**Theory:** We can convert a string back into an InputStream object in various ways. Like;

1. Using ByteArrayInputStream Class: The simplest and most straightforward way to convert a string into an InputStream object is to use ByteArrayInputStream
2. Using Apache Commons IO: The Apache Commons IO library provides IOUtils.toInputStream() method to easily convert a string into an instance of InputStream

**Code:**

import java.io.ByteArrayInputStream;

import java.io.InputStream;

import java.nio.charset.StandardCharsets;

public class Main {

public static void main(String args[]) {

String name = "Sristi";

System.out.println("String is: " + name);

try {

InputStream stream = new ByteArrayInputStream(name.getBytes(StandardCharsets.UTF\_8));

System.out.println("InputStream: " + stream);

System.out.println("Available bytes at the beginning: " + stream.available());

stream.read();

stream.read();

stream.read();

System.out.println("Available bytes at the end: " + stream.available());

stream.close();

}

catch (Exception e) {

e.getStackTrace();

}

}

}

**Learning Outcome:**

We have created a string named name. Here, we have been converting the string into the input stream named stream.