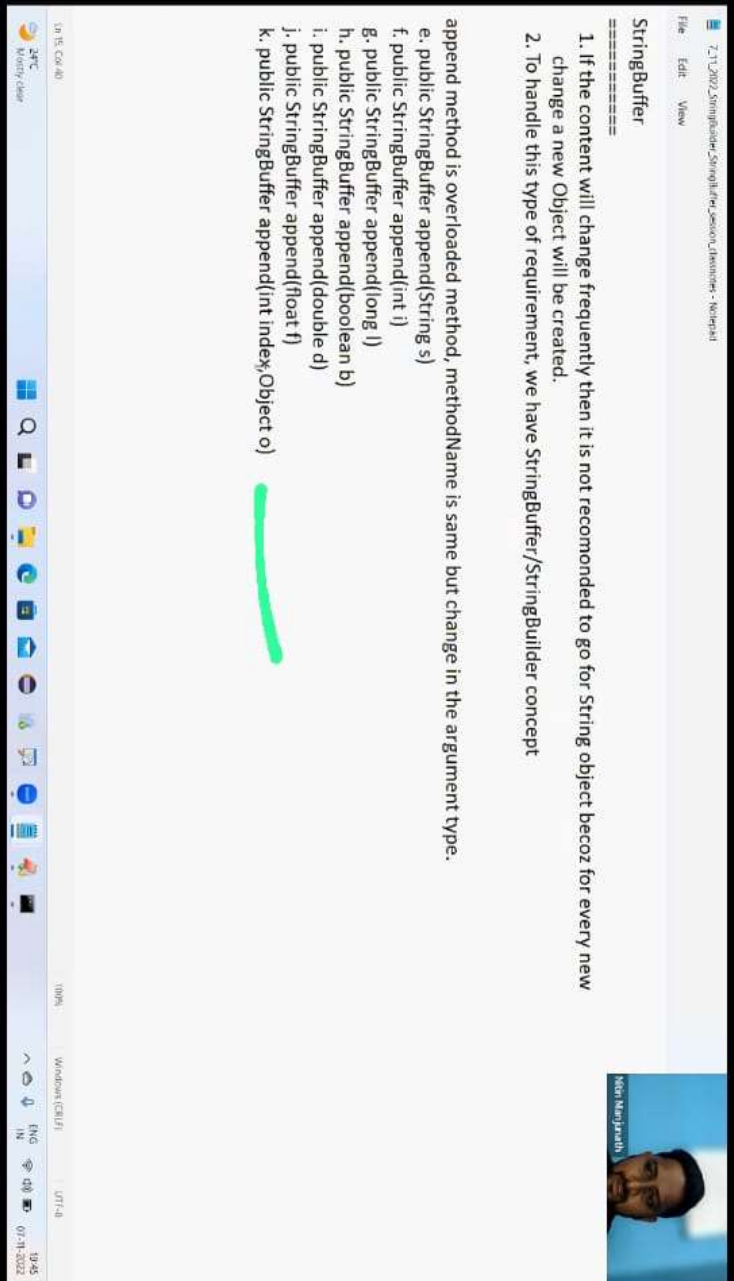


StringBuffer And Some String Programs



The screenshot shows a Notepad++ window with the following content:

```
7.11.2022 StringBuffer,StringBuilder,Json,JsonParser - Notepad++
File Edit View

StringBuffer
=====
1. If the content will change frequently then it is not recommended to go for String object because for every new
   change a new Object will be created.
2. To handle this type of requirement, we have StringBuffer/StringBuilder concept.

append method is overloaded method, methodName is same but change in the argument type.
e. public StringBuffer append(String s)
f. public StringBuffer append(int i)
g. public StringBuffer append(long l)
h. public StringBuffer append(boolean b)
i. public StringBuffer append(double d)
j. public StringBuffer append(float f)
k. public StringBuffer append(int index, Object o)
```

A green underline is drawn under the line `k. public StringBuffer append(int index, Object o)`.

The Windows taskbar at the bottom shows the system clock as 19:45 on 07-11-2022, and the language is set to ENG. A small video call window in the bottom right corner shows a man with a beard and a white cap, with the name "Naga Manjaveethi" visible.

```
sb.append(3.1414);  
sb.append(" This is exactly ");  
sb.append(true);  
System.out.println(sb); // P1 value is ::3.1414 This is exactly true
```

Overloaded methods

- l. public StringBuffer insert(int index,String s)
- m. public StringBuffer insert(int index,int i)
- n. public StringBuffer insert(int index,long l)
- o. public StringBuffer insert(int index,double d)
- p. public StringBuffer insert(int index,boolean b)
- q. public StringBuffer insert(int index,float s)
- r. public StringBuffer insert(int index,Object o)

2





File Edit View Search Document Project Tools Browser Format Window Help

Directory: C:\Program Files\Java\jdk-11.0.10\bin

TestApp.java

```
1 class TestApp {
2     public static void main(String[] args) {
3         StringBuffer sb= new StringBuffer("sachinrameshtendulkar");
4         System.out.println(sb);
5         sb.delete(6,12);
6         System.out.println(sb);
7
8         sb.deleteCharAt(7);
9         System.out.println(sb);
10
11     }
12 }
13
14 }
15
```

2, 11, 2022, Stimulator, Spring, Netpad, Stimulator, Netpad

ANSI

9:57

07-10-2022

Neer Rajgopal

```
sb.insert(6, "IND");  
System.out.println(sb);//sachinIND
```

Methods of StringBuffer

```
public StringBuffer delete(int begin, int end)  
It deletes the character from specified index to end-1.
```

```
public StringBuffer deleteCharAt(int index)  
It deletes the character at the specified index.
```

eg::

```
StringBuffer sb=new StringBuffer("sachinrameshtendulkar");  
sb.delete(6,12);  
System.out.println(sb);//sachintendulkar  
sb.deleteCharAt(13);  
System.out.println(sb);//sachintndulkar
```



A screenshot of a Windows desktop environment. The top taskbar shows the Start button, search icon, and several application icons including File Explorer, Edge, and a presentation viewer. The presentation viewer displays a slide with the same content as the main image. The desktop background is dark. The system tray at the bottom shows the date and time as 07-10-2022, 19:58.

File Edit View

```
StringBuffer sb=new StringBuffer("sachinrameshhendulkar");
```

```
System.out.println(sb); //sachintendulkar
```

```
System.out.println(sb);
```

It is used to reverse the given String.

```
sb.reverse());
```

```
System.out.println(sb);
```

2



public StringBuffer reverse()

It is used to reverse the given String.

```
eg:: StringBuffer sb=new StringBuffer("sachin");  
sb.reverse();  
System.out.println(sb);//mhcas
```

public void setLength(int Length)

It is used to consider only the specified no of characters and remove all the remaining characters.

```
eg::  
StringBuffer sb=new StringBuffer("sachinamesh");  
sb.setLength(6);  
System.out.println(sb);//sachin
```

public void trimToSize()

This method is used to deallocate the extra allocated free memory such that capacity and size are equal.

```
eg::  
StringBuffer sb = new StringBuffer(1000);  
System.out.println(sb.capacity());//1000
```





public void setLength(int length)

It is used to consider only the specified no of characters and remove all the remaining characters.

eg::

```
StringBuffer sb=new StringBuffer("sachinramesh");
```

```
sb.setLength(6);
```

```
System.out.println(sb);//sachin
```

public void trimToSize()

This method is used to deallocate the extra allocated free memory such that capacity and size are equal.

eg::

```
StringBuffer sb = new StringBuffer(1000);
```

```
System.out.println(sb.capacity());//1000
```

```
sb.append("sachin");
```

```
System.out.println(sb.capacity());//1000
```

```
sb.trimToSize();
```

```
System.out.println(sb);//sachin
```

```
System.out.println(sb.capacity());//6
```

Ln 87, Col 42

23°C
Boudh near



100%

Windows [CTRL]

UTT-6

ENG IN 20:28 07-10-2022



7/11/2022 StringBuffer, StringBuilder, StringBuffer, StringBuffer

File Edit View

```
System.out.println(sb.capacity()); // 1000
```

```
sb.trimToSize();
```

```
System.out.println(sb); // sachin
```

```
System.out.println(sb.capacity()); // 6
```

public void ensureCapacity(int capacity)

It is used to increase the capacity dynamically based on our requirement.

eg::

```
StringBuffer sb = new StringBuffer();
```

```
System.out.println(sb.capacity()); // 16
```

```
sb.ensureCapacity(1000);
```

```
System.out.println(sb.capacity()); // 1000
```



Select Command Prompt

```
D:\>javap java.lang.StringBuffer
Compiled from "StringBuffer.java"
public final class java.lang.StringBuffer extends java.lang.AbstractStringBuilder implements java.io.Serializable {
    static final long serialVersionUID;
    public java.lang.StringBuffer();
    public java.lang.StringBuffer(int);
    public java.lang.StringBuffer(java.lang.String);
    public java.lang.StringBuffer(java.lang.CharSequence);
    public synchronized int length();
    public synchronized int capacity();
    public synchronized void ensureCapacity(int);
    public synchronized void trimToSize();
    public synchronized void setLength(int);
    public synchronized char charAt(int);
    public synchronized int codePointAt(int);
    public synchronized int codePointBefore(int);
    public synchronized int codePointCount(int, int);
    public synchronized int offsetByCodePoints(int, int);
    public synchronized void getChars(int, int, char[], int);
    public synchronized void setCharAt(int, char);
    public synchronized java.lang.StringObject();
    public synchronized java.lang.StringBuffer append(java.lang.String);
    public synchronized java.lang.StringBuffer append(java.lang.StringBuilder);
    public synchronized java.lang.StringBuffer append(java.lang.CharSequence);
    public synchronized java.lang.StringBuffer append(java.lang.CharSequence, int, int);
    public synchronized java.lang.StringBuffer append(java.lang.CharSequence, int, int);
}
```



23°C
Boudly dear



ENGL
IN
07-10-2022
20:15

File Edit View

```
System.out.println(sb.capacity()); //16  
sb.ensureCapacity(1000);  
System.out.println(sb.capacity()); //1000
```

EveryMethod present in StringBuffer is synchronized, so at a time only one thread can are allowed to operate on StringBuffer Object, it would create performance problems, to overcome this problem we should go for StringBuilder.

1

StringBuilder(1.5v)

StringBuilder is same as StringBuffer(1.0v) with few differences

StringBuilder

No methods are synchronized

At a time more than one thread can operate so it is not ThreadSafe.

Threads are not required to wait so performance is high.

Introduced in jdk1.5 version



07.11.2022 StringBuilder, StringBuffer, Image - Paint

FileView

CopyPasteImageTools

BrushesShapesSizeColors

Lucida Console

14

B

I

U

S

Background fill

16

Content is fixed and it wont change frequently

String

thread

ThreadSafe

StringBuffer (synchronized)

waiting state

stringBuilder(1.5v)

NotThreadSafe

Content is not fixed and it changes frequently and worried about performance

23°C

Brandy bear

100%

FXG

IN

07.11.2022



StringBuiler

No methods are synchronized

At at time more than one thread can operate so it is not ThreadSafe.

Threads are not required to wait so performance is high.

Introduced in jdk1.5 version

String vs StringBuffer vs StringBuiler

=====

String => we opt if the content is fixed and it wont change frequently

StringBuffer => we opt if the content changes frequently but ThreadSafety is required

StringBuiler => we opt if the content changes frequently but ThreadSafety is not required



U

```
Editor - (D:\testapp\jsw)
File Edit View Search Document Project Tools Browser Register Window Help
Directory: C:\Users\...
D:\
testapp\src\main\java\
1
2
3
4
5
6
7
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25

//method chaining
System.out.println(name.toUpperCase().length());

StringBuffer sb = new StringBuffer("virat");

//method chaining
sb.append("kohli").
  insert(10, "anushka").
  reverse().
  append("IND").
  insert(sb.length(), "RCB").
  reverse();
System.out.println(sb);

1
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11
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25

In 14 Col 13 28 00 PC ANS
ENC 20:35 07-10-2022
```



81

applying method on the result we can call another method which forms method chaining.

eg::

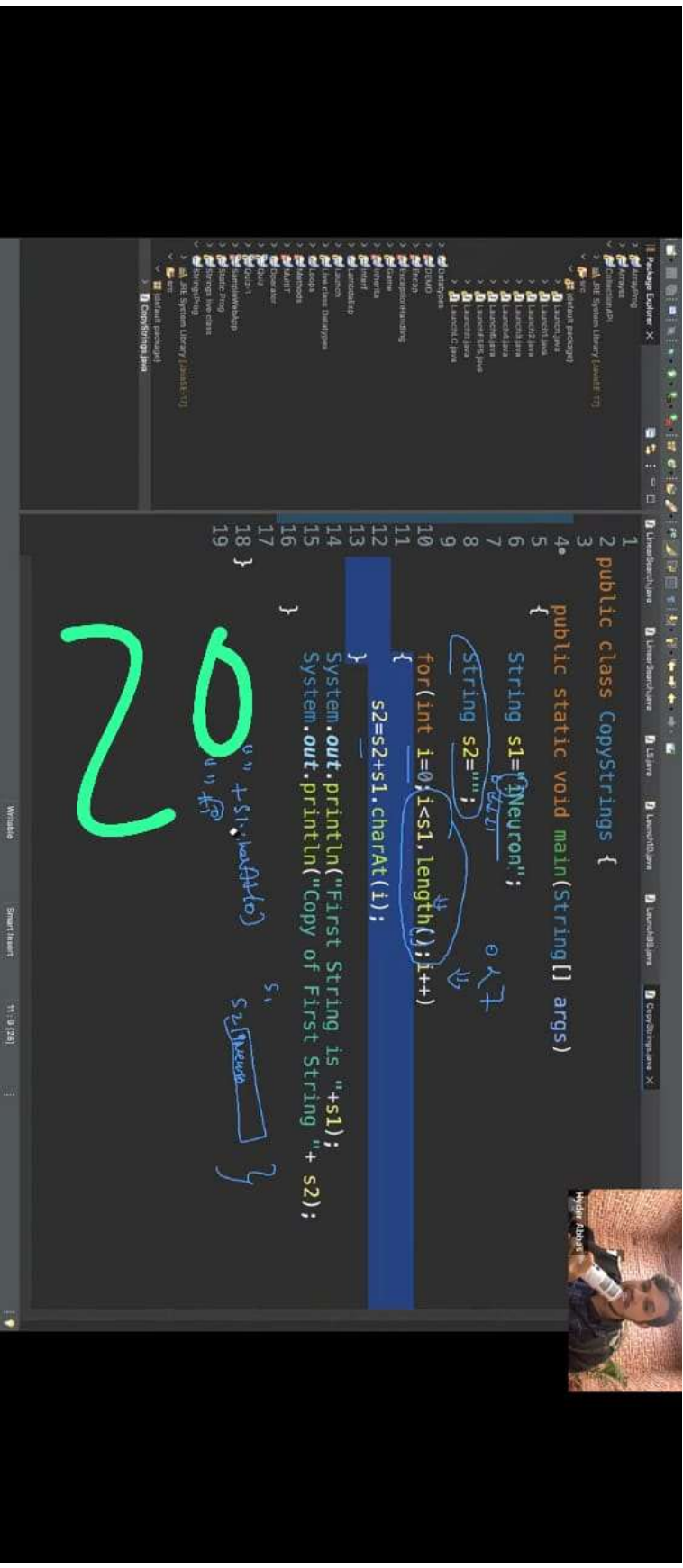
```
StringBuffer sb = new StringBuffer();  
sb.append("sachin").insert(6, "tendulkar").reverse().append("IND").delete(0, 4).reverse();  
System.out.println(sb);
```

eg#2.

```
class TestApp {  
    |  
    public static void main(String[] args) {  
  
        String name = "sachin";  
        String data = name.toUpperCase();  
        int count = data.length();  
        System.out.println(count);  
  
        //method chaining  
        System.out.println(name.toUpperCase().length());  
  
        StringBuffer sb = new StringBuffer("Virat");
```

Virat



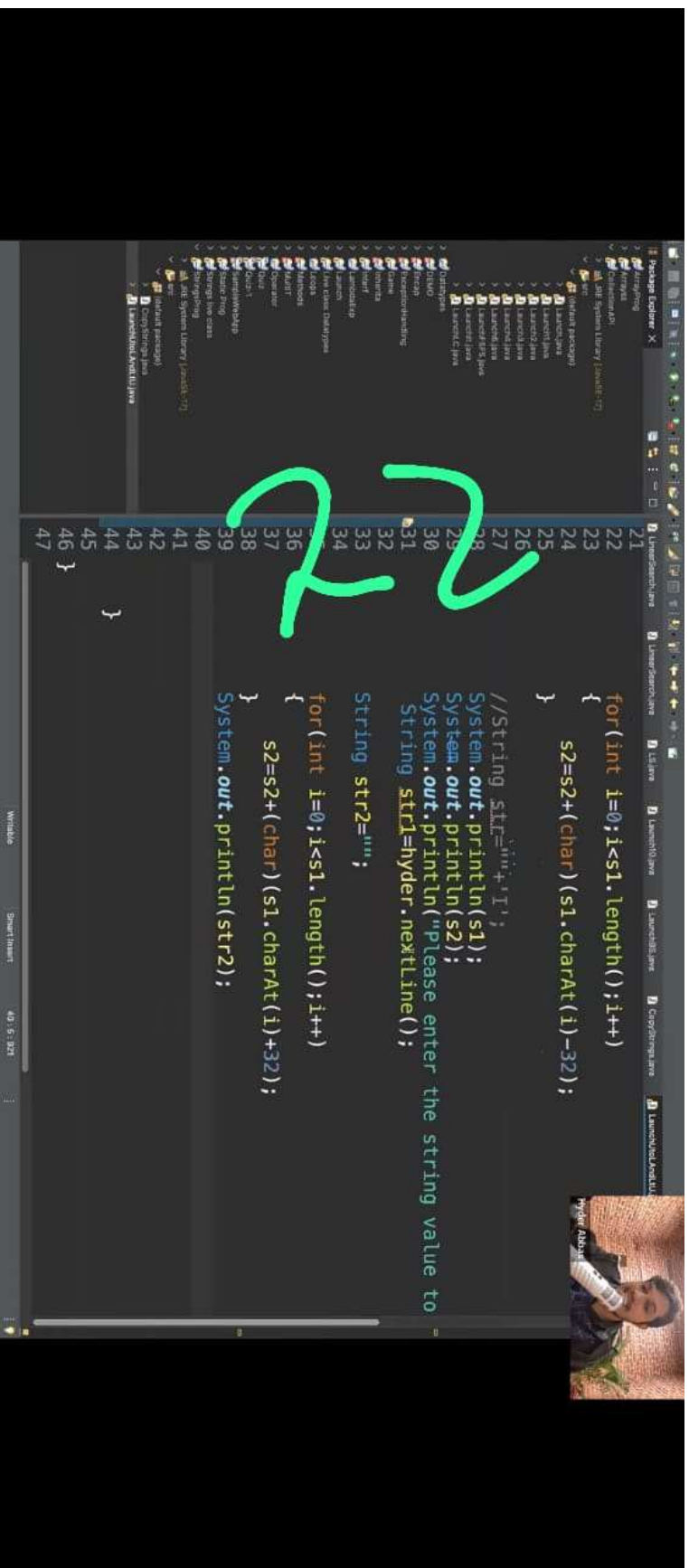

$$u'' + 51.1 \text{ rad/s}^2$$

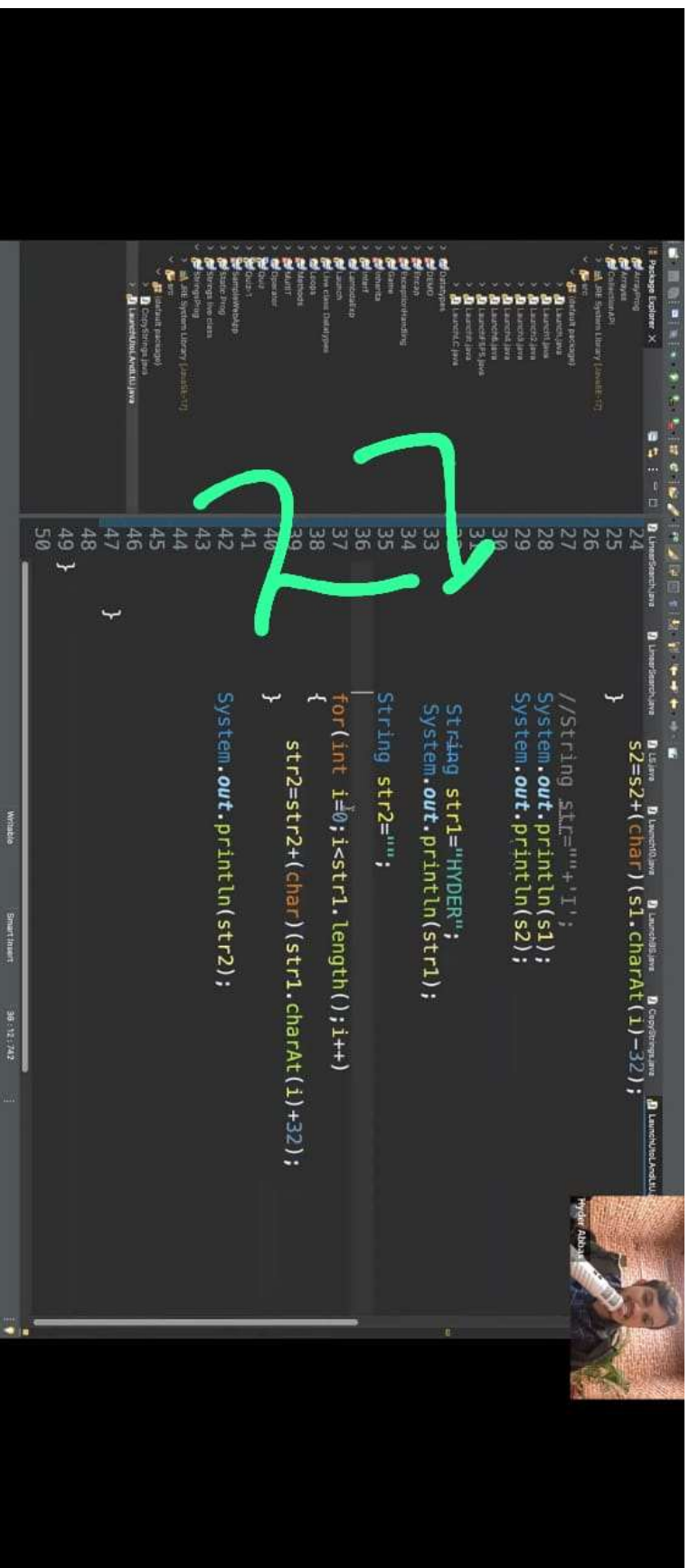
S_1
 S_2 new

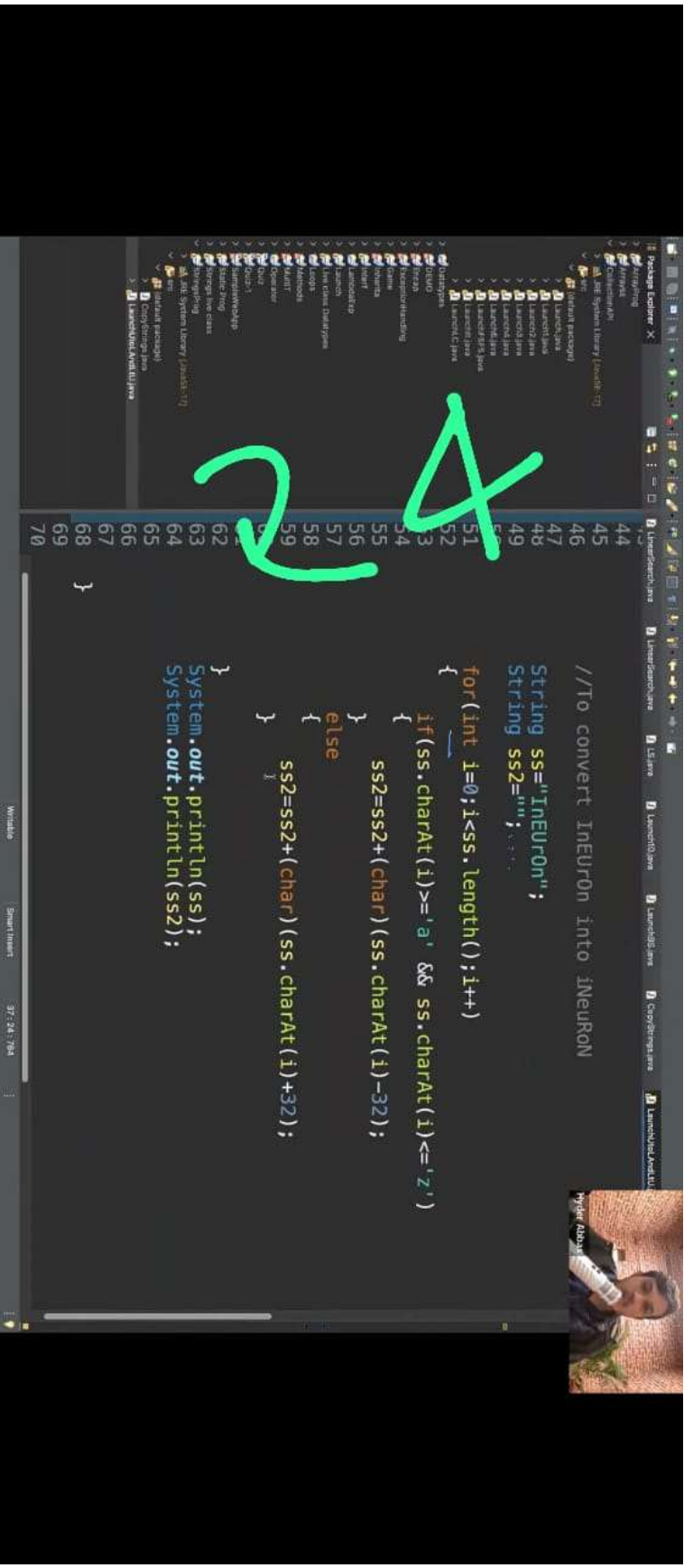
IDE screenshot showing Java code for a Caesar cipher. A large green '2' is drawn over the code.

```
9
10 char ch='a';//97-32= 65/A
11 System.out.println(ch);
12 ch=(char) (ch-32);
13 System.out.println(ch);
14
15
16
17 Scanner hyder=new Scanner(System.in);
18 System.out.println("Please enter the string value to
19 String s1=hyder.nextLine();
20 String s2="";
21
22 for(int i=0;i<s1.length();i++)
23 {
24     s2=s2+(char)(s1.charAt(i)-32);
25 }
26
27 //String s1="";
28 System.out.println(s1);
29 System.out.println(s2);
30
31
32 }
33
34 }
35
```

IDE interface includes a Project Explorer on the left, a Package Explorer on the right, and a Run/Debug Console at the bottom. A small video feed of a person is visible in the bottom right corner.








```
13 System.out.println("Original String: "+s1);
14 System.out.println("After Reversing: "+s2);
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
```

```
//ineuron java -> ayal poruendi
String str1="ineuron java";
String str2="";
String sarr[]=str1.split(" ");
for(String elem: sarr)
{
    for(int i=elem.length()-1; i>=0; i--)
    {
        str2=str2+elem.charAt(i);
        str2=str2+" ";
    }
}
System.out.println(str2);
}
```

25



```

26         for(int i=elem.length()-1; i>=0; i--)
27         {
28             str2=str2+elem.charAt(i);
29         }
30         str2=str2+" ";
31     }
32 }
33 System.out.println(str2); // not true
34
35 // ineuron java -> java ineuron
36
37 String ss="ineuron java";
38 String ss2="";
39 String ar[]=ss.split(" ");
40 for(int i=ar.length-1; i>=0; i--)
41 {
42     ss2=ss2+ar[i]+" ";
43 }
44 System.out.println(ss);
45 System.out.println(ss2);
46
47
48
49
50
51 }
52

```



```
26 // neuron.java -> java neuron
27
28 {
29     for (int i=elem.length()-1; i>=0; i--)
30     {
31         str2=str2+elem.charAt(i);
32     }
33     System.out.println(str2); // not run! awai
34 }
35
36 // neuron.java -> java neuron
37 String ss="neuron java";
38 String ss2="";
39 String ar[]=ss.split(" ");
40 for (int i=ar.length-1; i>=0; i--)
41 {
42     ss2=ss2+ar[i]+" ";
43     // "u" + "java" + "c" + "n"
44 }
45 System.out.println(ss);
46 System.out.println(ss2);
47
48 }
49
50 }
51
52 }
```



2-1 = 1 9 10 12 -> 0
07-20

27



File Edit View

```
Q> String str = " ",  
    str.trim();  
System.out.println(str.equals("") + " " + str.isEmpty());
```

What is the result?

- A. true false
- B. true true
- C. false true
- D. false false

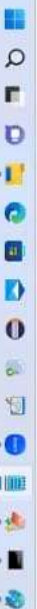
Answer: D(becoz of immutable)

I

28



Ln 17, Col 30
20°C
Clear



100%

Windows [CTRL]

UTP-8

22:12
07/17/2022

File Edit View

Answer: D(becoz of immutable)

```
Q> String s = "SACHIN TENDULKAR";  
int len= s.trim().length();  
System.out.println(len);
```

What is the result?

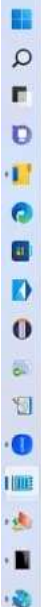
- A. 10
- B. 9
- C. 8
- D. compilation fails
- E. None of the above

Answer: D(16 is the length)

Q> String s= "Hello world";

Ln 25, Col 26

20°C
Clear



100%

Windows (CTRL)

UTR 6

22:14
07/17/2022



Answer: E(16 is the length)

```
Q> String s= "Hello world";  
s.trim();  
int i = s.indexOf(" ");  
System.out.println(i);
```

What is the result?

- A. Exception at runtime
- B. -1
- C. 5
- D. 0

Answer: C

```
Q> String s1= "Java",  
String s2=new String("java");  
//line-1  
{  
    System.out.println("equal");  
}
```

30



1000

1
JAVA

```
"java".equalsIgnoreCase("java");
```

```
c. string s3 = s2;
```

```
if(s3.equalsIgnoreCase(s3))
```

D. `if(s1.toLowerCase() == s2.toLowerCase())`

31

Untitled - Paint

FileView

Clipboard

Image

Tools

Brushes

Lucida Console

Size

Color

To print equal which code trigger

A. String s1=s2;
if(s1==s2)

B. if(s1.equalsIgnoreCase(s2))

C. String s3= s2;
if(s3.equalsIgnoreCase(s3))

D. if(s1.toLowerCase() == s2.toLowerCase())

s1

java

s2

java

s3

java

True

52

100%

22:28

07-11-2022



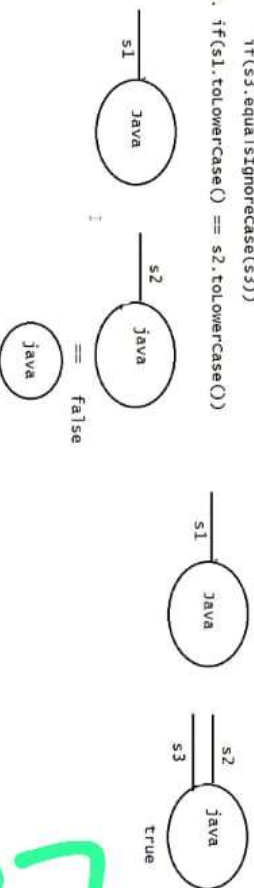
To print equal which code trragr

A. String s1=s2;
if(s1==s2)

B. if(s1.equalsIgnoreCase(s2))

C. String s3= s2;
if(s3.equalsIgnoreCase(s3))

D. if(s1.toLowerCase() == s2.toLowerCase())



"java".equalsIgnoreCase("java");

5





File Edit View

What will be the result of compiling and executing Test class?

```
public class Test {  
    public static void main(String[] args) {  
        String str = "Java Rocks!";  
        System.out.println(str.length() + " : " + str.charAt(10));  
    }  
}
```

- A. 11:!
- B. Exception is thrown at RunTime
- C. 11:s
- D. CompilationError

Answer: A

36



Ln 75, Col 61

29°C
Brouly, clear



100%

Windows [CTRL]

UTT 6

FMG
IN 22:35
07/11/2022

Answer: A

What will be the result of compiling and executing Test class?

```
public class Test {  
    public static void main(String[] args) {  
        String s1 = "Oca";  
        String s2 = "oCa";  
        System.out.println(s1.equals(s2));  
    }  
}
```

- A. true
- B. false
- C. compilation error
- D. None of the above

Answer: B

1



5:44 PM

7/11/2022, 5:00pm, Jhonny - Notepad

File Edit View

Answer: B

What will be the result of compiling and executing Test class?

```
public class Test {  
    public static void main(String[] args) {  
        String fName = "James";  
        String lName = "Gosling";  
        System.out.println(fName = lName);  
    }  
}
```

- A. CompilationError
- B. true
- C. false
- D. None of the above

Answer: D

85



VoLTE

4G 546 K/s

69

Ln 175, Col 10

25°C
Bosch City



100%

Windows (CTRL)

UTR 6

22:39
07-11-2022

What will be the result of compiling and executing Test class?

```
public class Test {  
    public static void main(String[] args) {  
        String fName = "James";  
        String lName = "Gosling";  
        System.out.println(fName = lName);  
    }  
}
```

- A. CompilationError
- B. true
- C. false
- D. None of the above

Answer: D(Gosling will be printed)

65



Answer: D(Gosling will be printed)

What will be the result of compiling and executing Test class?

```
public class Test {  
    public static void main(String[] args) {  
        String str = "Good"; //Line 3  
        change(str); //Line 4  
        System.out.println(str); //Line 5  
    }  
}
```

```
private static void change(String s) {  
    s.concat("_Morning"); //Line 9  
}  
}
```

- A. Good
- B. _Morning
- C. Good_Morning
- D. None of the above

Answer: A




```
StringBuilder sb = new StringBuilder("Good");//Line 3  
change(sb); //Line 4  
System.out.println(sb); //Line 5  
}
```

```
private static void change(StringBuilder s) {  
    s.append("_Morning");//Line 9  
}
```

- A. Good
- B. _Morning
- C. Good_Morning
- D. None of the above

Answer: C

q.



Q>

What will be the result of compiling and executing Test class?

public class Test {

public static void main(String[] args) {

String str1 = new String("Core");

String str2 = new String("Core");

System.out.println(str1 == str2);

}

A. true

B. false

C. Core

D. Core

Answer: D

25



What will be the result of compiling and executing Test class?

public class Test extends String {

@Override

public String toString() {

return "TEST";

}

public static void main(String[] args) {

Test obj = new Test();

System.out.println(obj);

}

}

A. TEST

B. Output contains some string @ symbol

C. Exception is thrown at runtime

D. Compilation Error

Answer: D

✗



Answer: D

What will be the result of compiling and executing Test class?

```
public class Test {  
    @Override  
    public String toString() {  
        return "TEST";  
    }  
}
```

```
public static void main(String[] args) {  
    Test obj = new Test();  
    System.out.println(obj);  
}
```

- A. TEST
- B. Output contains some string @ symbol
- C. Exception is thrown at runtime
- D. Compilation Error

Answer: D

If a class is final, we can inherit or use it with extends keyword



File Edit View

Answer: D

What will be the result of compiling and executing Test class?

```
public class Test {
    public String toString() {
        return "TEST";
    }
}
```

```
public static void main(String[] args) {
    Test obj = new Test();
    System.out.println(obj);
}
```

- A. TEST
- B. Output contains some string @ symbol
- C. Exception is thrown at runtime
- D. Compilation Error

Answer: A



4 LTE 100% B/S

NS

Consider below code:

```
//Test.java  
public class Test {  
    public static void main(String[] args) {  
        String s1 = "OCAJP";  
        String s2 = "OCAJP" + "";//"OCAJP"  
        System.out.println(s1 == s2);  
    }  
}
```

What will be the result of compiling and executing Test class?

- A. OCAJP
- B. true
- C. false
- D. CompilationError

Answer: B

65





final string fName = "James";

string fName = "Gosling";

string name1 = fName + "Name"; // JVM

string name2 = "Gosling"; // Compiler "JamesGosling"

string name3 = "James" + "Gosling"; // Compiler "JamesGosling"

System.out.println(name1 == name2); // false

System.out.println(name2 == name3); // true

