String Handling

_____

=>String Handling allow to perform String Manipulation Operations

such as insert new Content , Update and Delete existing Content

=>String Handling can be implemented using following 3 classes

i. java.lang.String Class => immutable class

ii. java.lang.StringBuffer Class => mutable Class

iii. java.lang.StringBuilder Class => Unsynchronized Class

java.lang.String Class

_____

=>A set of characters(Alphabet, Digits, special characters) is called

string.

=>String class is immutable(non changeable) class that means , once it store data, it can not be change, if we are trying to change its data Then it allocates new Memory ie address will changed.

Note: hashCode() is method java.lang.Object class and it returns stored

reference of Object.

Note: java.langObject class is root class of java pre define class Hierarchy.

Constructors of java.lang.String Class

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String() => It creates Object of String class without Value

String(String) =>It creates Object of String class with copy of

parameter value

String(char[])=> It converts character type array into String Object

String(byte[],int startindex)

String(byte[],int startindex, int LastIndex)

String(int[],int startindex)

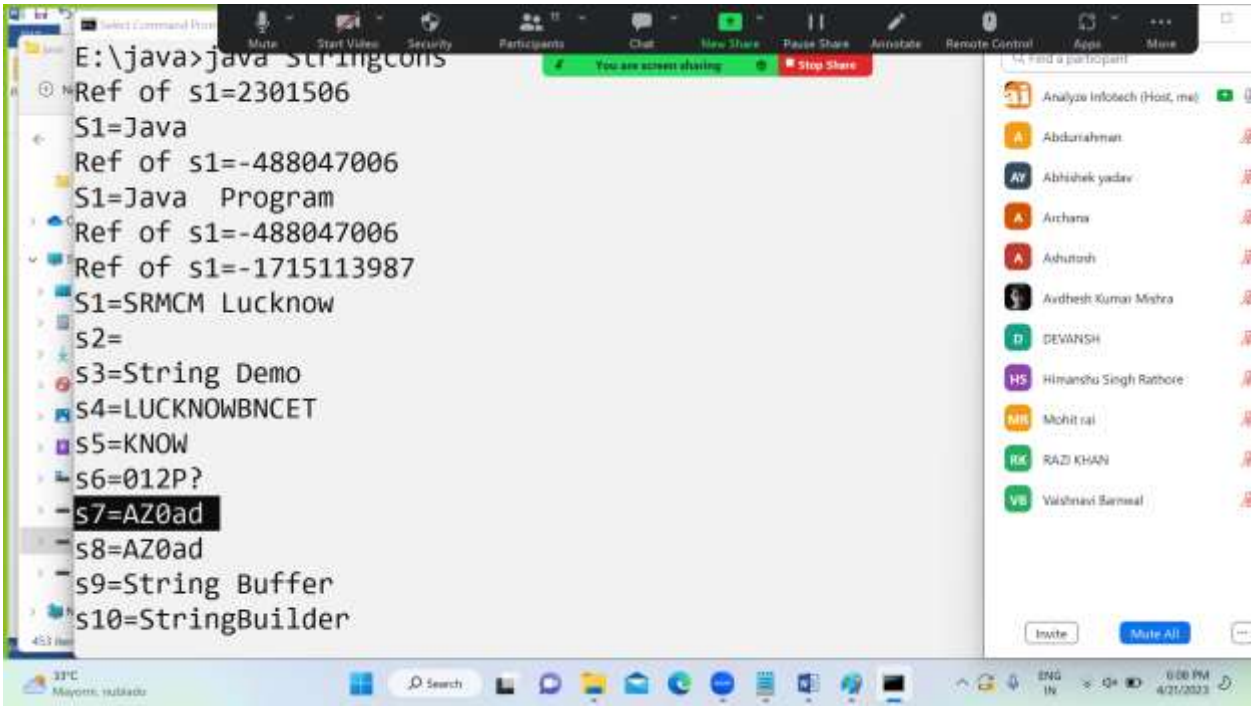
String(int[],int startindex, int LastIndex)

String(StringBuffer)

String(StringBuilder)

```
//Program to Demonstraion of String class Constructor
class Stringcons
{
public static void main(String args[])
{
String s1="Java";
System.out.println("Ref of s1="+s1.hashCode());
System.out.println("S1="+s1);
s1=s1+"  Program";
System.out.println("Ref of s1="+s1.hashCode());
System.out.println("S1="+s1);
System.out.println("Ref of s1="+s1.hashCode());
s1="SRMCM Lucknow";
System.out.println("Ref of s1="+s1.hashCode());
System.out.println("S1="+s1);
char ch[]={'L','U','C','K','N','O','W','B','N','C','E','T'};
int value[]={10,20,48,49,50,80,525,21,243,4,32,2,2,2343,32,23,32,23,4};
byte value2[]={65,90,48,97,100};
String s2=new  String();//def Constructor
  String s3=new String("String Demo");
  String s4=new String(ch);
  String s5=new String(ch, 3, 4);
  String s6=new String(value,2,5);
  String s7=new String(value2, 0);
  String s8=new String(value2);
  String s9=new String( new StringBuffer("String Buffer"));
  String s10=new String(new StringBuilder("StringBuilder"));
```

```
System.out.println("s2="+s2);
System.out.println("s3="+s3);
System.out.println("s4="+s4);
System.out.println("s5="+s5);
System.out.println("s6="+s6);
System.out.println("s7="+s7);
System.out.println("s8="+s8);
System.out.println("s9="+s9);
System.out.println("s10="+s10);
}
}
```



Methods of java.lang.String class

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length()

_____ returns total number of characters

charAt(int index)

_____ returns index at specified character

indexOf(char)

_____ It returns index of 1st occruring character

substring(int n)

_____ It returns sub string from n index to
end of String

substring(int n,int m)

_____ It returns a sub string from n
index to (m-1) index ie Total Numbers of characters are
(m-n).

toUpperCase()

_____ It converts a String into Upper Case

toLowerCase()

_____ It converts a String into Lower Case

== Operator vs equals() method

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=> == operator compare reference of 2 String Object and

equals() method compare content of 2 String Objects.

equalsIgnoreCase()

_____

=> It compares content of 2 String Object ignoring Case.

int compareTo()

_____

=>It compare 2 String Object and returns an Integer Value

if 0, Then Both Strings are equal

if +ive, Then String1 is greater than String2 in Alphabatical

if -ive, Then String1 is less than String2 in Alphabatical

trim()

_____It removes Blank spaces of Bafore and after of String

toString() => Converts an Object into String

String.valueOf(int)=> It converts int to String

String.valueOf(byte)=> It converts byte to String

String.valueOf(short)=> It converts short to String

String.valueOf(float)=> It converts float to String

String.valueOf(double)=> It converts double to String

String.valueOf(long)=> It converts long to String

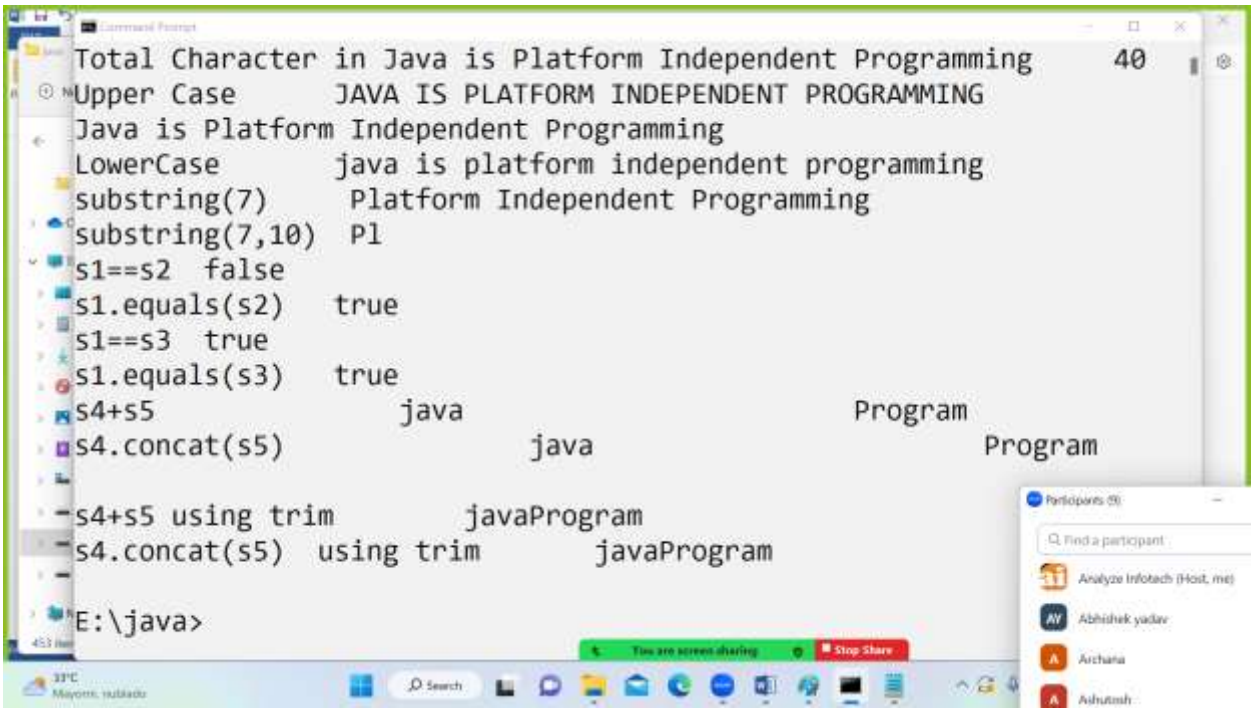
```
class  StringMethod
{
public static void main(String ard[])
{
String s="Java is Platform Independent Programming";
System.out.println("Total Character in "+s+"\t"+s.length());
System.out.println("Upper Case \t"+s.toUpperCase());
System.out.println(s);
System.out.println("LowerCase \t"+s.toLowerCase());
System.out.println("substring(7)\t"+s.substring(7));
System.out.println("substring(7,10)\t"+s.substring(7,10));
String s1="java";
String s2=new String("java");
String s3="java";
System.out.println("s1==s2\t"+(s1==s2));
System.out.println("s1.equals(s2)\t"+(s1.equals(s2)));
System.out.println("s1==s3\t"+(s1==s3));
System.out.println("s1.equals(s3)\t"+(s1.equals(s3)));
String s4="          java          ";
String s5="          Program         ";
System.out.println("s4+s5\t"+(s4+s5));
System.out.println("s4.concat(s5)\t"+(s4.concat(s5)));
```

```
System.out.println("s4+s5 using trim\t"+(s4.trim()+s5.trim()));

System.out.println("s4.concat(s5)  using trim\t"+(s4.trim().concat(s5.trim())));

}

}
```



Question 1

_____

WAP to input a String like ANALYZE and print in following pattern

A

AN

ANA

ANAL

ANALY

ANALYZ

ANALYZE

Question2

_____ WAP to input a sentence and count

1. Total Number of words

2. Total Number of Alphabet

3. Total Number of Digits

4. Total Number of space

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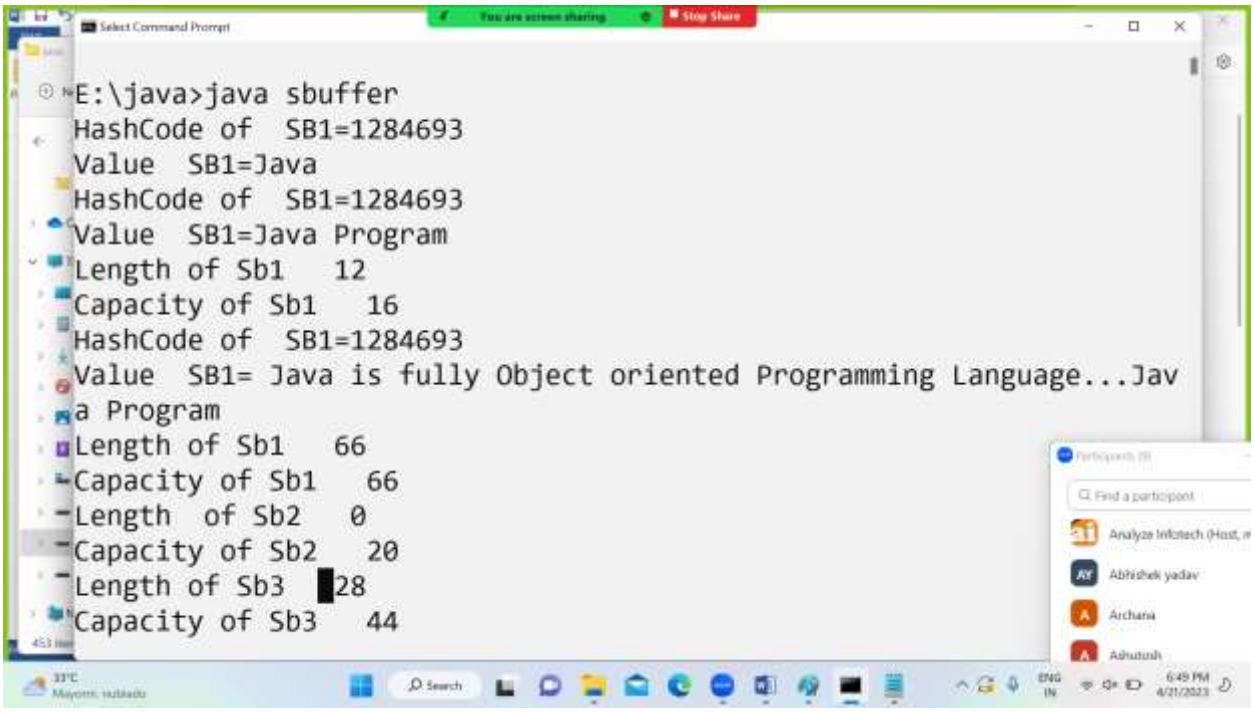
java.lang.StringBuffer Class

=> StringBuffer class is mutable class ,so once we store data,

It can be edit without changing its address.

```
//Program to Demonstration of StringBuffer
class sbuffer
{
public static void main(String args[])
{
StringBuffer sb1=new StringBuffer();
StringBuffer sb2=new StringBuffer(20);
StringBuffer sb3=new StringBuffer(" is Platform IndependJavaent");
sb1.append("Java");
System.out.println("HashCode of  SB1="+sb1.hashCode());
System.out.println("Value  SB1="+sb1);
sb1.append(" Program");
System.out.println("HashCode of  SB1="+sb1.hashCode());
System.out.println("Value  SB1="+sb1);
System.out.println("Length of Sb1   "+sb1.length());
System.out.println("Capacity of Sb1   "+sb1.capacity());
sb1.insert(0," Java is fully Object oriented Programming Language...");
System.out.println("HashCode of  SB1="+sb1.hashCode());
System.out.println("Value  SB1="+sb1);
System.out.println("Length of Sb1   "+sb1.length());
System.out.println("Capacity of Sb1   "+sb1.capacity());
System.out.println("Length  of Sb2   "+sb2.length());
```

```
System.out.println("Capacity of Sb2   "+sb2.capacity());

System.out.println("Length of Sb3   "+sb3.length());

System.out.println("Capacity of Sb3   "+sb3.capacity());

sb3.reverse();

System.out.println("SB3="+sb3);

sb3.reverse();

System.out.println("SB3="+sb3);

System.out.println("SB3="+new String(sb3).toUpperCase());

}

}
```


Select Command Prompt
You are screen sharing
Stop Share
E:\java>java sbuffer
HashCode of SB1=1284693
Value SB1=Java
HashCode of SB1=1284693
Value SB1=Java Program
Length of Sb1 12
Capacity of Sb1 16
HashCode of SB1=1284693
Value SB1= Java is fully Object oriented Programming Language...Jav
a Program
Length of Sb1 66
Capacity of Sb1 66
Length of Sb2 0
Capacity of Sb2 20
Length of Sb3 28
Capacity of Sb3 44
Find a participant
Abhishek yadav
Archana
Ashutosh