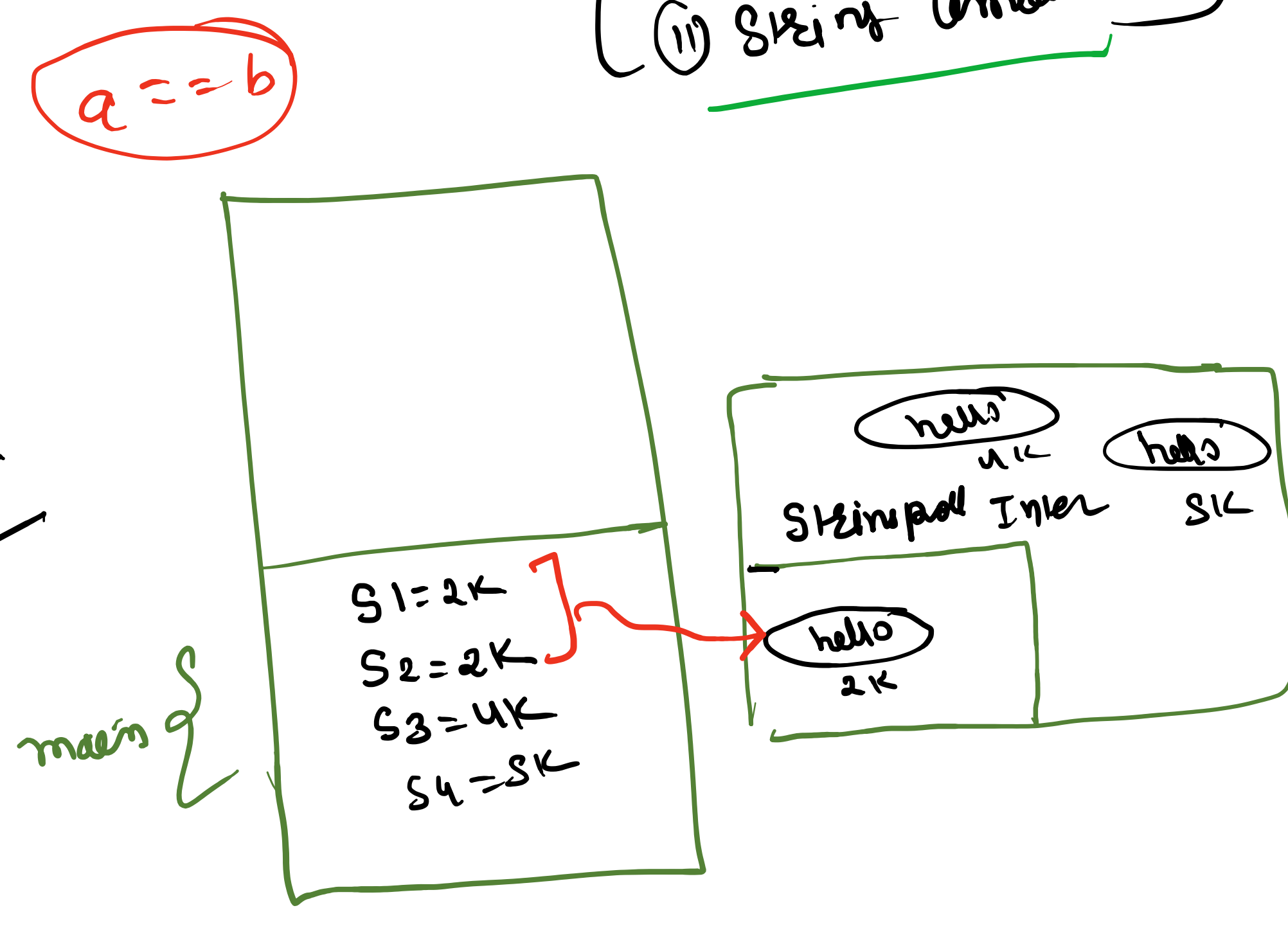


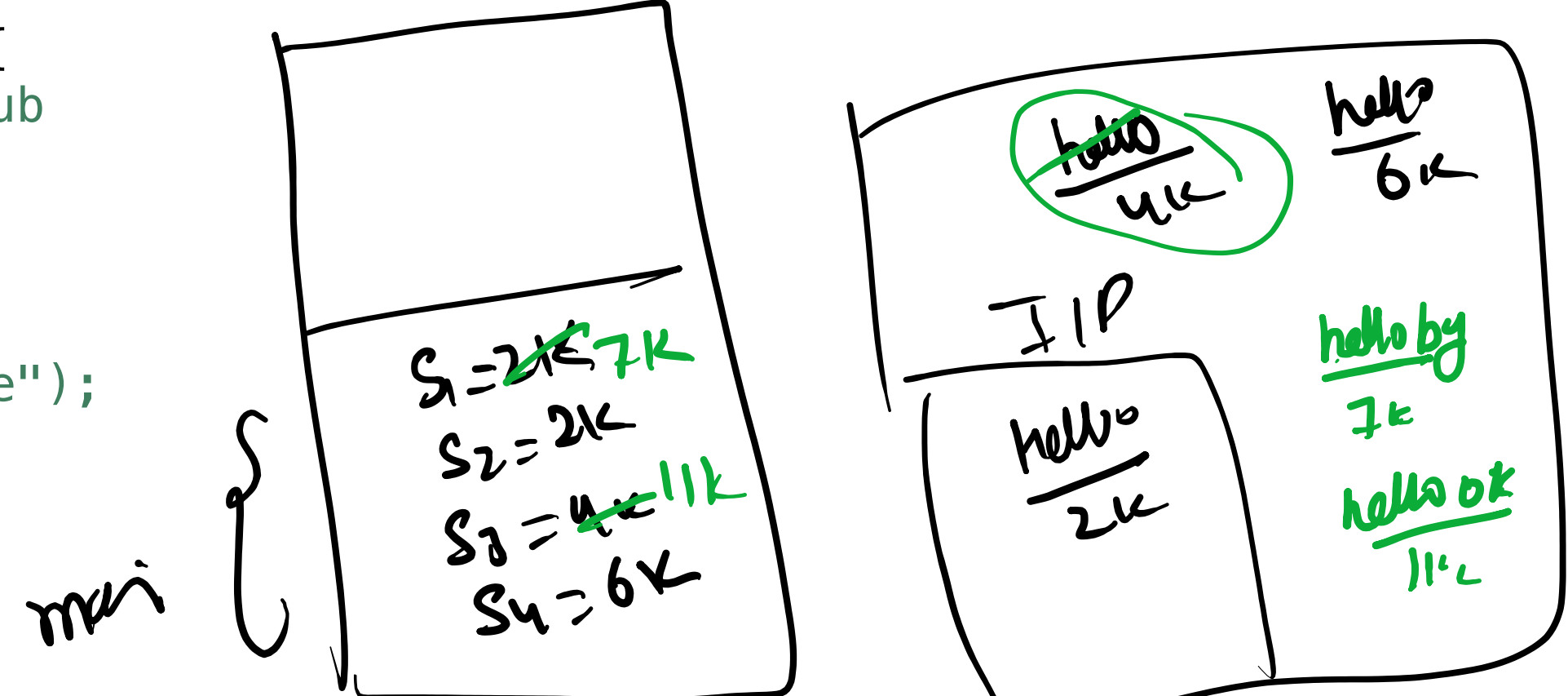
String → class → non-primitive → heap

- ① String syntax
- ② String immutability

```
public static void main(String[] args) {  
    // TODO Auto-generated method stub  
    String s1 = "hello";  
    String s2 = "hello";  
    String s3 = new String("hello");  
    String s4 = new String("hello");  
}  
  
System.out.println(s1==s2);  
System.out.println(s3==s2);  
System.out.println(s3==s4);
```

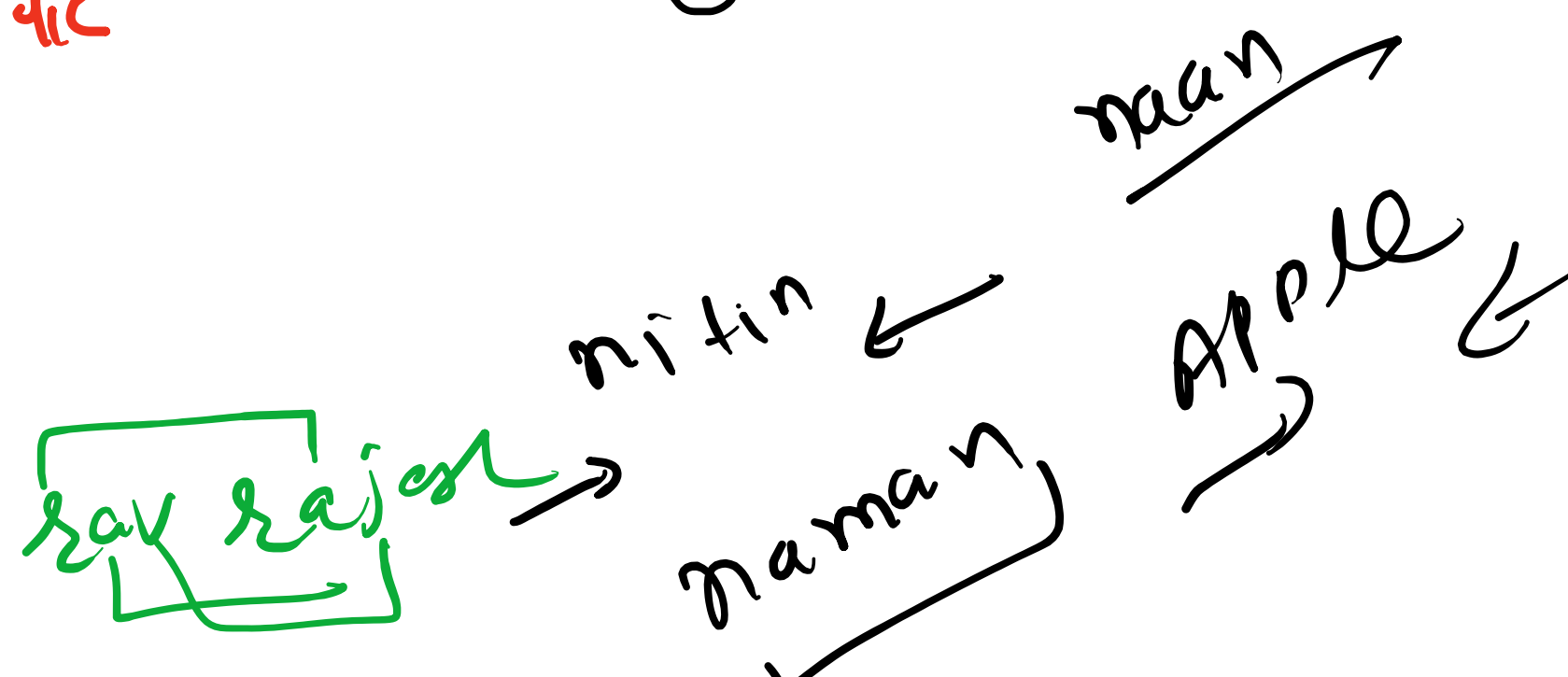


```
public static void main(String[] args) {  
    // TODO Auto-generated method stub  
    String s1 = "hello";  
    String s2 = "hello";  
    String s3 = new String("hello");  
    String s4 = new String("hello");  
    s1 = s1 + "bye"; // s1.concat("bye");  
    System.out.println(s1);  
    s3 = s3 + 10K;  
}
```



```
public static void main(String[] args) {  
    // TODO Auto-generated method stub  
    String s1 = "hello";  
    String s2 = new String("hello");  
    // System.out.println(s1.equals(s2));  
    System.out.println(equals(s1, s2));  
}  
  
public static boolean equals(String s1, String s2) {  
    if (s1 == s2) {  
        return true;  
    }  
    if (s1.length() != s2.length()) {  
        return false;  
    }  
    for (int i = 0; i < s1.length(); i++) {  
        if (s1.charAt(i) != s2.charAt(i)) {  
            return false;  
        }  
    }  
    return true;  
}
```

hello
hello



or
raj
raja
raja

Kunal
Komal

11) Raj < Rajesh
Ankit < Ankitg

for (k=i, k<j, k++)
ans = ans + s.charAt(k);
Coding blocks

i=2
j=6

hello
h e l l o
h e l l o
h e l l o
h e l l o
h e l l o

for (i=0, i<s.length(), i++)
for (j=i, j<s.length(), j++)
sub (i, j)

(0,1) < h
(0,2) < he
(0,3) < hel
(0,4) < hell
(0,5) < hello

h e l l o
i j
c(0,1) < h
c(0,2) < he
c(0,3) < hel
c(0,4) < hell
c(0,5) < hello

```
public static void main(String[] args) {  
    // TODO Auto-generated method stub  
    String s = "codingblocks";  
    System.out.println(s.substring(2, 7));  
    System.out.println(s.substring(2));  
    System.out.println(s.substring(4, 4));  
    printSubString(s);  
}  
  
public static void printSubString(String s) {  
    // TODO Auto-generated method stub
```

ans = xy5
c = 0
1 2 3 4 5
2 P a f e a b k m n p a c i a e z w y k e l l a a a a
↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑

```
for (i=0, i<s.length(), i++) {  
    char ch = s.charAt(i);  
    if (isVowel(ch)) {  
        c++;  
    }  
    ans = max(ans, c);  
}
```

j-i=1
i j
(0,1) < h
(1,2) < e
(2,3) < l
(3,4) < l
(4,5) < o

lengths
i j
(0,1) < h
(1,2) < he
(2,3) < hel
(3,4) < hell
(4,5) < hello

hello
0 1 2 3 4 5
i j
j-i=5

```
for (len=1, len<=s.length(), len++) {  
    for (i=0, i<=s.length()-len, i++) {  
        j = i+len;  
        sub (i, j);  
    }  
}
```