String fruit = “banana”;

int index = 0;

while (index < fruit.length()) {

char letter = fruit charAt(index);

System.out.println(letter);

index++;

}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| fruit | fruit.length() | index | index < fruit.length() | letter | Console |
| banana | 6 | 0 | true | b | b |
| banana | 6 | 1 | true | a | a |
| banana | 6 | 2 | true | n | n |
| banana | 6 | 3 | true | a | a |
| banana | 6 | 4 | true | n | n |
| banana | 6 | 5 | true | a | a |
| Banana | 6 | 6 | false |  |  |

a) A **StringIndexOutOfBoundsException**, which is in the package java.lang

b) 6

c) charAt in the java.lang package

d) getLastLetter

e) 14

String fruit = “banana”;

int index = 0, count = 0;

while (index < fruit.length()) {

if (fruit.charAt(index) == ‘a’) {

count++;

}

index++;

}

System.out.println(“number of a’s = ” + count);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| fruit | fruit.length() | index | Fruit.charAt(index) | Console |
| banana | 6 | 0 | b |  |
| banana | 6 | 1 | a |  |
| banana | 6 | 2 | n |  |
| banana | 6 | 3 | a |  |
| banana | 6 | 4 | n |  |
| banana | 6 | 5 | a |  |
| banana | 6 |  |  | number of a’s = |

3.

noun.equals("apple") = true

noun.equals(verb) = true

x.equals(y) = EXCEPTION

noun < verb = EXCEPTION

noun.compareTo(verb)<0 = true

x.compareTo(y) = EXCEPTION

noun.compareTo("apple")==0 = false

4. 0 words start with ‘s’ in words.txt, however 18 words start with ‘s’ in elementNames.txt