

Question:1a. For each lambda expression below, name the parameters and the free variables.

i. Runnable r = () → {

```
int[][] products = new int[s][t]; for (int i = 0; i < s; i++) { for(int j = i + 1; j < t; j++) {  
products[i][j] = i * j;  
}  
}}
```

Answer: variables **s** and **t** are not declared and initialized within the lambda block nor are they passed as parameters to the lambda function;hence, they are free variables.

Parameters: none

Free variables: s, t

```
ii. Comparator<String> comp = (s, t) → { if(ignoreCase == true) { return  
s.compareToIgnoreCase(t);  
} else {  
return s.compareTo(t);  
}}
```

Parameters: s, t

Free variables: ignoreCase

Answer: variables **ignoreCase** is not declared and initialized within the lambda block nor was it passed as parameters to the lambda function;hence, it is a free variable.