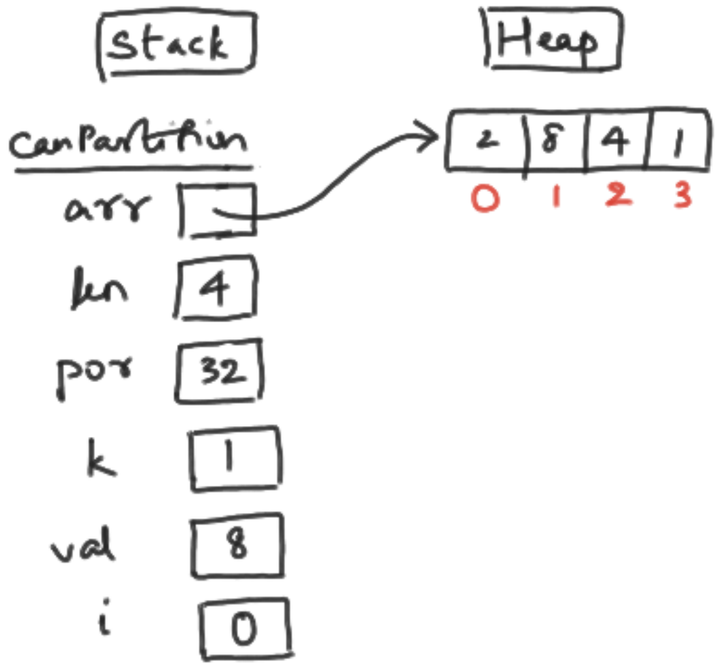
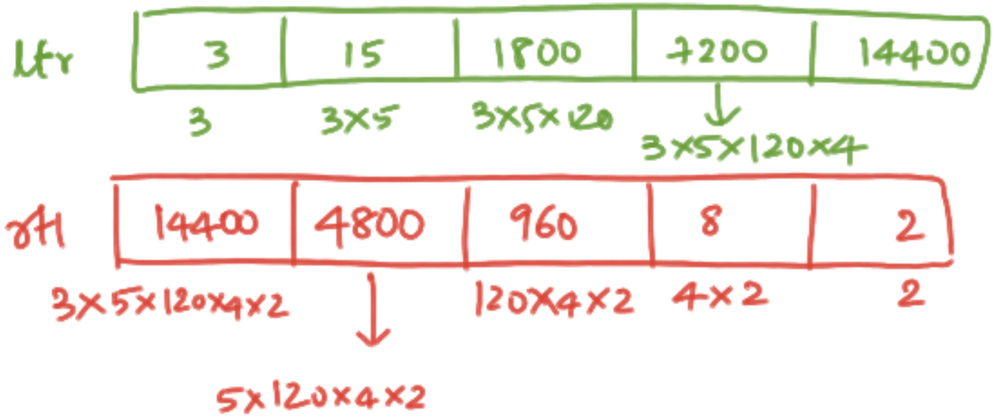




for i=3, prodOfRem = ltr[2] x rtl[4]

for any i, prodOfRem = ltr[i-1] x rtl[i+1]

```
for (100 times) {
    for (20 times) {
        print("hello");
    }
}
```

```
for (50 times){
    print("hello")
}
for (50 times)
    print hello
for (50 times)
    print hello
```

```
x=1234
sum=0
  while(x>0){
        d = x % 10
        sum += d
        x = x/10
  }
return sum
```

sum(1234) = sum(123) + 4

(10) (6)

acbbaaadd11022

a : 4
b : 2
c : 1
d : 2

counts

counter = 3

0	1	2	3	...	25	26	27	...	51	52	53	54	..	61
4	2	1	2		0	0	0		0	1	2	2		0
↑	↑	↑	↑		↑	↑	↑		↑	↑	↑	↑		↑
a	b	c	d		z	A	B		Z	0	1	2		9

counts[i] = counts[i] + 1

a - 97 → 0
b - 98 → 1
c - 99 → 2
⋮
z - 122 → 25

i = av - 97

A - 65 → 26
B - 66 → 27
C - 67 → 28
⋮
Z - 90 → 51

i = av - 39

0 - 48 → 52
1 - 49 → 53
2 - 50 → 54
⋮
9 - 57 → 61

i = av + 4

0	0	0	0	...	0	0	0		0	0		0		0		0	0	0		0
0	1	2	3	...	47	48	49	...	57	58	...	64	65	66	...	90	91	...	96	97	98	...	122
						0	1		9				A	B		Z				a	b		z

"Rohankumar32";

K : 1
R : 1
a : 2
h : 1
m : 1
n : 1
o : 1
r : 1
u : 1
2 : 1
3 : 1

"aaAAAbcdd1"

A : 3
a : 2
b : 1
c : 1
d : 2
1 : 1

```
printCharCounts (String s) {
    l = s.length();

    0Count, 1Count, .. , 9Count
    aCount, bCount, ... , zCount
    ACount, BCount, ... , ZCount
    for(i=0 ; i<l ; i++) {
        char c = s.charAt(i);
        if(c == 'A') {
            ACount += 1
        } else if( c == 'B') {
```

```
  0  1  2 ... 25 26 27 ... 51 52 53 ... 61
[ 3  0  0 ...  0  0  0 ..  0  0  0 ..  0 ]
  A, B, C ... Z, a, b ... z, 0, 1, ..., 9
```

A - 65	a - 97	0 - 48
B - 66	b - 98	1 - 49
C - 67	c - 99	2 - 50
D - 68	⋮	3 - 51
⋮		⋮
Z - 90	z - 122	9 - 57

i = av - 65 i = av - 71 i = av + 4

A : 3

```
  0  1  2
[ 3  1  2 ]
  a  b  c
```

"abccaa"

public static void printCharCount(String s){

1. Initialize counts array
2. loop over each char & increment in counts array
3. loop over counts array & print all non-zero counts

```
int[] counts
        = new int[62];
for(i=0; i<cou.len; i++){
    counts[i] = 0
}
```

[11] → 11

[2,7,-3] → 7

[-1, 5, 2, -11] → 5

Rohan eats apples → nahoR eate apples

banana → banana

apple → eppla

input → "One two three"

fo → "enO_ owt_"

cw → "three"

```
int[] arr = new int[] {-1, 12, 3};
int x = scanner.nextInt();
print("Num at index " + x + " is "
                        + arr[x]);
scanner.close();
print ("End")
```

```
int[] arr = new int[]{1,2,3};
 int x = scanner.nextInt();
try {
    print(... + arr[x]);
} catch (Exception e){
    print("Entered "+x+
            "out of bounds");
}
scanner.close();
print("End");
```

"__hello;__world.!,_:__"

"hello world"

1. only one space between words
2. Input doesn't contain nums
3. Contain alphabets (u & l)
   & special char
4. No spl char in middle of word
   (words are seperated by
   atleast one space in input)

" , ` hello,: "

"hello"

".,art, " → "art"

```
word = ""
final = ""
for each ch in input {
    if (ch is alpha) {
        word += ch;
    }
    else if (word not empty) {
        final = final + word + " "
        word = ""
    }
}

return final;
```

" .,abc;! def. "

[10, 10, 7] ss = $10^2 + 7^2$

hs = 10

for each side {
  if (side == hs)
    continue

10, 10, 7

hs = 10

sum sq all sides = $10^2 + 10^2 + 7^2 = a$

b → sum of sq of remaining sides

$b = a - hs^2$

arr [10, 10, 7]
↓ sort
[7, 10, 10]

arr[0]^2 + arr[1]^2 = arr[2]^2

```
char ch = 'a';
```

Character.isLetter(ch) → true

Character.isLower(ch) → true

Character.isUpper(ch) → false

Character.toLower('U') → 'u'

Character.toLower(ch) → 'a'

Character.toUpper(ch) → 'A'

```
char reverseChar(char ch) {
    if (Character.isLetter(ch)) {
        if (Character.isUpper(ch)) {
            return Character.toLower(ch);
        } else {
            return Character.toUpper(ch);
        }
    } else {
        return ch;
    }
}
```

```
for (int i=0; i<10; i++) {
    if (i % 2 == 0) {
        print("even")
        continue;
    }
    else {
        print("odd")
    }
}
```

```
for (..) {
    if (i % 2 == 0) {
        print("even")
    }
    else {
        print("odd");
    }
}
```

```
if (a == 2) {
    return true;
}
else {
    return false;
}
```

```
boolean result;
if (a == 2) {
    result = true;
} else {
    result = false;
}
return result;
```

```
if (a < 2){
    return 100;
}
else if (a < 5){
    return 200;
}
else if (a < 10){
    return 300;
}
else {
    return 400;
}
```

```
if (a<2) {
    return 100;
}
// a>=2
if (a< 5) {
    return 200;
}
// a>=5
if (a<10) {
    return 300;
}
// a >= 10
return 400;
```

```
String a = "rohan";
String b = "foo";
int x = a.length(); → 5
int y = b.length(); → 3

class String {

    public static int length() {
        ...
    }

}

class Test {
    public static int sum(int x,
                          int y){
        return x + y;
    }
    public static void test() {
        int x = sum(2, 3);
    }
}
```

```
public class Car {
    String name;

    public String getName(){
        return name;
    }
}

main() {
    Car c1 = new Car();
    c1.name = "Tesla";

    Car c2 = new Car();
    c2.name = "Toyota";

    String x = c1.getName();
    String y = c2.getName();

    Engine e1 = new Engine();

    e1.cc = 1000;
    e1.name = "Honda"
    String z = e1.getName(); → Honda

    z.length()
}
}
```

```
public class Engine {
    int cc
    String name
    public int getCC(){
        return cc;
    }
    public String getName(){
        return name;
    }
}
```

```
public class Point {
    int x; int y;
    public Point(int initX, int initY){
        x = initX; y = initY;
    }
    public int getX() {
        return x;
    }
    public int getY() {
        return y;
    }
    public void setX(int newX){
        x = newX;
    }
    public void setY(int newY){
        y = newY;
    }
    public void incrementX() { }
        x = x+1
    }
    public void decrementY(){
        y = y-1;
    }
}
```

```
main() {
    Point a = new Point(2, 3)
```

Point
x : 7
y : 2

a.getX(); → 2

a.setX(5);
a.getX(); → 5

a.incrementX()
a.incrementX()

a.getX(); → 7

a.decrementY();
a.getY(); → 2

Class Professor

→ salary (int)

firstName

lastName

subject

// getters & setters for all attributes

getFullName()

incrementSalary() → increment current salary by 10000

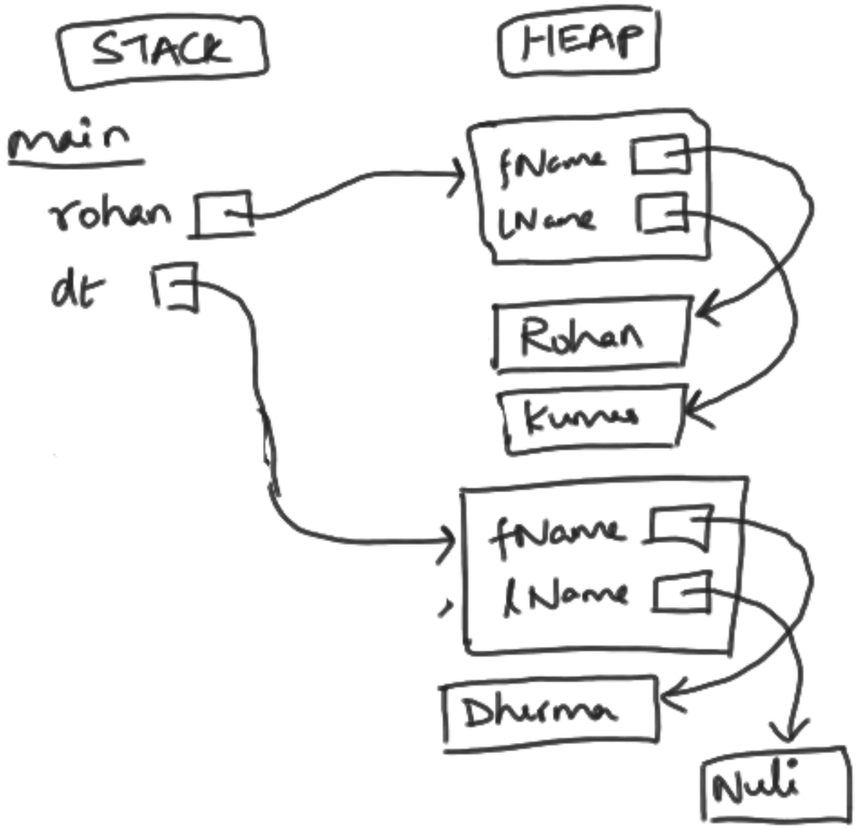
// constructor

```
public class Part1 {
    public String fsg(String dna){
        ...
    }

    main() {
        Part1 q = new Part1()
        String ru = q.fsg("SMH...")
    }                          ↓
                           "ATG..."
}
```

```
class Prof {
    String fName;
    String lName;

    public Prof (String f,
                 String l){
        this.fName = f;
        this.lName = l;
    }

    public String getFName (){ }
        return this.fName;
    }
    public String getFullName(){
        return this.fName + " " +
                    this.lName;
    }
}
```

```
Class Driver {
    main () {
        Prof rohan = new Prof("Rohan", "Kumar");
        Prof dt = new Prof("Dharma"
                           "Nuli");

        print(rohan.getFName());
    }
```

Rohan
Dharma



0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

b → "abbcdbbefgbbarbbh" c → 4

a → "bb"

howMany(a,b) → 4

b.indexOf(a,0)
b.indexOf(a,3)
b.indexOf(a,7)
b.indexOf(a,12)
b.indexOf(a,16)

count = 0

indexToLookFrom = 0 → 10 → 14 → -1

```
c=0
ind=0
while(true) {
    int aIndex= b.indexOf(a, ind);
    if(aIndex== -1) {
        return c;
    }
    c+=1;
    ind = aIndex + a.length();
}
```

href="https://youtube.com/AbCd" "hello"

hr="http://YouTuBe.Com/abcd"

abcd

hr="https://YOUTUBE.COM/aBcD"

https://youtube.com/AbCd

http://YouTube.com/abcd

https://YOUTURE.COM/aBcD

```
for each word {
  newWord = word.toLowerCase()
    a = "youtube.com"
    i =   nW.indexOf(a);
    if(i==-1){
        continue;
    }
     int start=
     int end =
     print (substring between
                start & end)
}
```

-

```
Iterable<String> a = ...
for(String w : a) {
    print(w);
}

Iterable<int>    b = ..
for(int i : b) {
    print(i)
}
```

```
int[] nums= new int[]{3,7,-11};
for(int i=0 ; i<nums.length; i++){
    println(nums[i]);
}
for(int num: nums){
    println(num);
}
```

```
3
7
-11
```

```
Iterable<String> it = ..
for(String w:it){
    println(w);
}
```

```
0: 3
1: 7
2: -11
```

```
for (int i=0; i<nums.length;i++){
    println( i + ": " + nums[i]);
}
```

```
<html>
   <p> Hey there </p>
   <br>
   <div></div>
<html>
```

```
<html>
<p>Hey
there</p>
<br>
<div></div>
<html>
```


```
word.indexOf("\"");
```