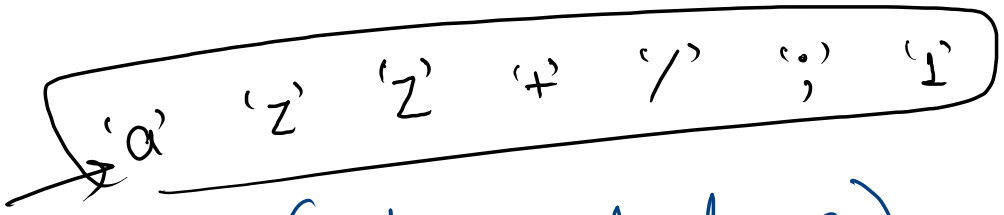
⇒ data types

- int
- char
- boolean
- long
- float
- short
- byte



(String and loops)

String ⇒ sequence of character collection

ex ⇒ // declare a string

1) String str = "aBbbczaA";

2) String str = new String();

str = "";

String str = new String("aBbbczaA");

str = "aBbbczaA";

functions :-

```
String str = "Geekster Java";
             0 1 2 3 4 5 6 7 8 9 10 11 12
```

indexes

1) `str.length();` ⟶ 13

Note: last index will always be one less than length
why? → because index always starts from zero

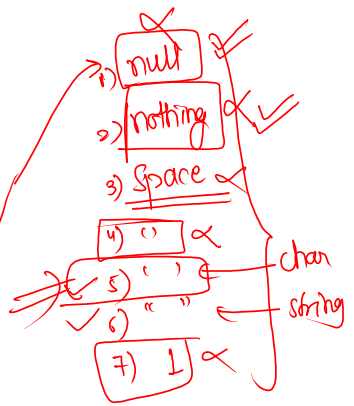
3) `String str = "GeekSteR";`
`str.toUpperCase()` → "GEEKSTER"

4) `str.toLowerCase()` → geekster

functions :-

```
String str = "Geekster Java";
             0 1 2 3 4 5 6 7 8 9 10 11 12
```

2) `str.charAt(10);` ⟶ 'a'
`str.charAt(0);` ⟶ 'G'
`str.charAt(8);` ⟶ ' '



Duel alternate characters

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str = scn.nextLine();

    // for ( initialization ; condition ; inc / dec )

    for (int i = 0; i < str.length(); i = i + 2) {
        char ch = str.charAt(i);
        System.out.print(ch);
    }

}
```

8 < 7

i < 7

i <= 6

str = "abcdefg" ;

0 1 2 3 4 5 6

length → 7

i = 0 → 'a'

i = 2 → 'c'

i = 4 → 'e'

i = 6 → 'g'

i = 8 < 7

false

output

aceg

str = "abcdefg" ;

0 1 2 3 4 5 6

str.length() → 7 (i < str.length())

str.length() - 1 → 6 (i <= str.length() - 1)

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    String str = scn.nextLine();

    // for ( initialization ; condition ; inc / dec )

    for (int i = 0; i < str.length(); i = i + 2) {
        char ch = str.charAt(i);
        System.out.print(ch);
    }

}
```

str = "DhirajManoj";

0 1 2 3 4 5 6 7 8 9 10

i = 0 → D

i = 2 → i

i = 4 → a

i = 6 → M

i = 8 → n

i = 10 → j

i = 12 < 11

false

output

DiaMnj