Note:-

( ) ⟶ Parenthesis

[ ] ⟶ Square brackets

{ } ⟶ Curly braces / flower braces

< > ⟶ Triangular brackets

Male or Female

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    char ch = scn.next().charAt(0);

    if ( ch == 'M' || ch == 'm' ) {
        System.out.println("You are a male");
    } else if ( ch == 'F' || ch == 'f' ) {
        System.out.println("You are a female");
    } else {
        System.out.println("Type again");
    }
}
```

```
switch(ch) {
    case 'M' :
        System.out.println("You are a male");
        break;
    case 'm' :
        System.out.println("You are a male");
        break;
    case 'F' :
        System.out.println("You are a female");
        break;
    case 'f' :
        System.out.println("You are a female");
        break;
    default :
        System.out.println("Type again");
        break;
}
```

⇒ ASCII value

↳ a unique no. assigned to each and every character

'A' → 65
'B' → 66
'C' → 67
⋮
'Z' → 90

67 66

```
if ('C' < 'B'){
    Syso("Hi1");
} else {
    Syso("Hi2");
}
```

jumping character

small case

ch = 'b' —(3 times)→ 'e'

```
if ('a' <= ch <= 'w') {
    jump 3 times to right
} else {
    Can't Jump
}
```

Capital case

ch = 'D' —(3 times)→ 'A'

```
if ('D' <= ch <= 'Z') {
    jump 3 times to left
} else {
    Can't Jump
}
```

a b c d e f g h ----

given

ch = 'a' → 97

```
if ( ch >= 'a' && ch <= 'z' ) {
```

((97 >= 97) && (97 <= 122))

```
    ch = (char)(ch + 3);
}
```

'a' → 97 ✓
'b' → 98
'c' → 99
'd' → 100
=
:
'z' → 122

Code

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    char ch = scn.next().charAt(0);

    if (ch >= 'a' && ch <= 'z') {
        if (ch >= 'a' && ch <= 'w') {
            char ans = (char)(ch + 3);
            System.out.println(ans);
        } else {
            System.out.println("Can't jump");
        }
    } else if ( ch >= 'A' && ch <= 'Z' ) {
        if (ch >= 'D' && ch <= 'Z') {
            char ans = (char)(ch - 3);
            System.out.println(ans);
        } else {
            System.out.println("Can't jump");
        }
    }
}
```

Explanation

ch = 'd'

typecasting

char ans = (char)(ch + 3);

= (char)(100 + 3);

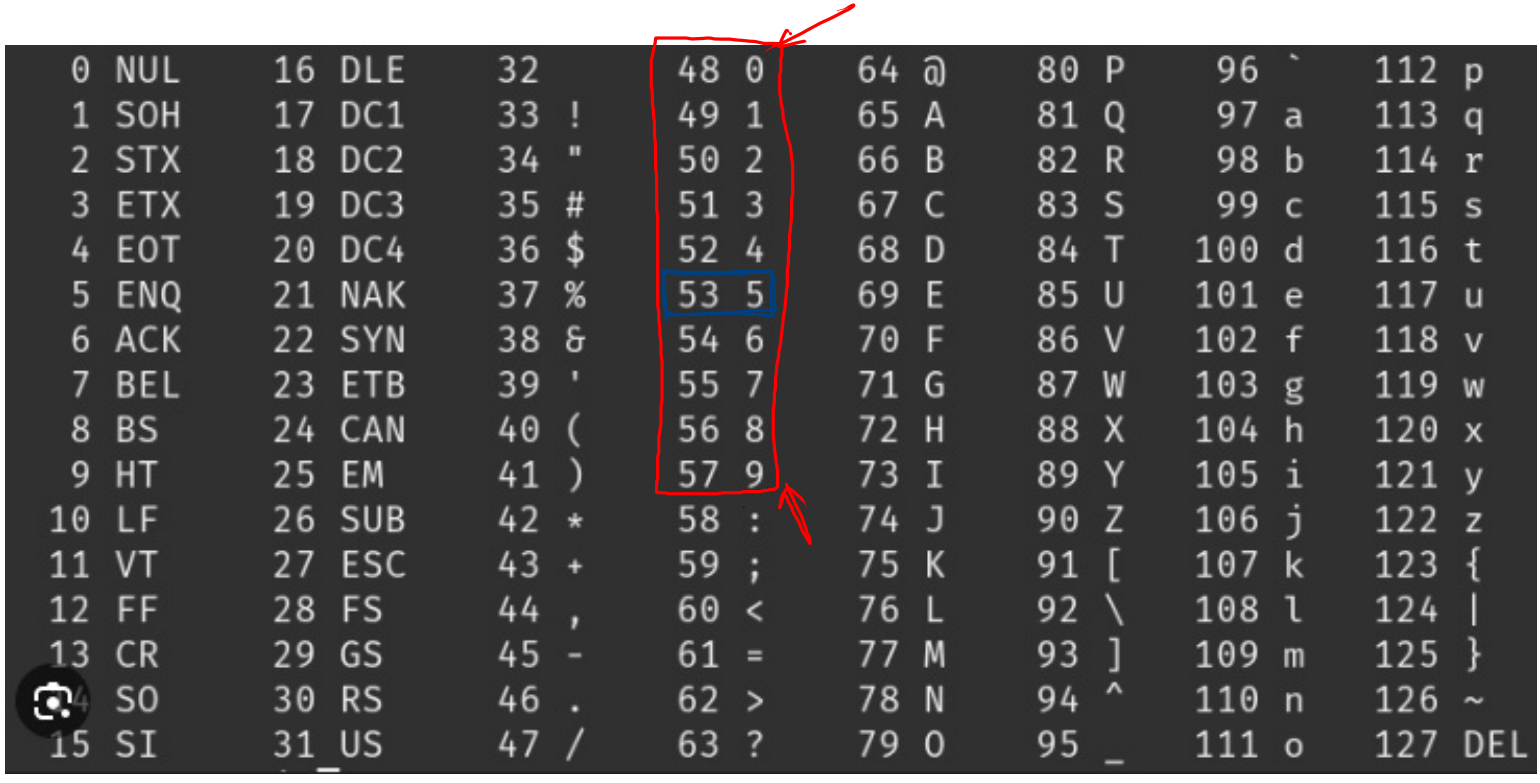
= (char)(103);

= 'g'

assume

'a' → 97
'b' → 98
'c' → 99
'd' → 100
'e' → 101
'f' → 102
'g' → 103
⋮
'z' → 122

actual ascii table (don't learn ever)



0	NUL	16	DLE	32		48	0	64	@	80	P	96	`	112	p
1	SOH	17	DC1	33	!	49	1	65	A	81	Q	97	a	113	q
2	STX	18	DC2	34	"	50	2	66	B	82	R	98	b	114	r
3	ETX	19	DC3	35	#	51	3	67	C	83	S	99	c	115	s
4	EOT	20	DC4	36	$	52	4	68	D	84	T	100	d	116	t
5	ENQ	21	NAK	37	%	53	5	69	E	85	U	101	e	117	u
6	ACK	22	SYN	38	&	54	6	70	F	86	V	102	f	118	v
7	BEL	23	ETB	39	'	55	7	71	G	87	W	103	g	119	w
8	BS	24	CAN	40	(	56	8	72	H	88	X	104	h	120	x
9	HT	25	EM	41	)	57	9	73	I	89	Y	105	i	121	y
10	LF	26	SUB	42	*	58	:	74	J	90	Z	106	j	122	z
11	VT	27	ESC	43	+	59	;	75	K	91	[	107	k	123	{
12	FF	28	FS	44	,	60	<	76	L	92	\	108	l	124	|
13	CR	29	GS	45	-	61	=	77	M	93	]	109	m	125	}
14	SO	30	RS	46	.	62	>	78	N	94	^	110	n	126	~
15	SI	31	US	47	/	63	?	79	O	95	_	111	o	127	DEL

Type Casting :- converting one data type into another

Implicit :- which converts automatically

Ex:-

```
int val = 'd' + 1;
val = 101
```

Explicit :- which we have to perform forcefully

Ex:-

```
char val = 'd' + 1;
charval = (char) 101;
char val = 'e'
```

Note :-

String is having highest priority of all

Small Capital or Digit

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    char ch = scn.next().charAt(0);

    if ( ch >= 'a' && ch <= 'z' ) {
        System.out.println("Small case");
    } else if ( ch >= 'A' && ch <= 'Z' ) {
        System.out.println("Capital case");
    } else if ( ch >= '0' && ch <= '9' ) {
        System.out.println("Digit");
    } else {
        System.out.println("None");
    }
}
```

Add if a digit

```
char ch = '5';
```

5

```
if( ch >= '0' && ch <= '9' ) {
        int num = ch - '0';
        Syso( num + 100);
}
```

Explanation

Assumed

'0' → 60
'1' → 61
'2' → 62
'3' → 63
'4' → 64
'5' → 65
'6' → 66
'7' → 67
'8' → 68
'9' → 69

```
char ch = '0';
int num = ch - '0';
```

Imp

formula

= '0' - '0'

= 60 - 60

= 0

code

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    char ch = scn.next().charAt(0);

    if ( ch >= '0' && ch <= '9' ) {
        int num = ch - '0';
        System.out.println(num + 100);
    } else {
        System.out.println("This is not a digit");
    }
}
```