

Looping :

1. While loop

Initialization

```
while(condition) {
```

```
    do some task
```

```
    increment or decrement
```

```
}
```

2. Do while loop

3. For loop

4. For each loop or enhanced loop.

Generally for each loop we use with array or collection of classes.

### Reference data types or non primitive data types

It is use to store value as well as reference of another data types.

4 types.

1. array
2. class
3. interface
4. enum

array : array is use to store more than one value of same types. In java array is known as fixed in memory size.

Array declaration

datatype arrayName[];

`int abc[];` declaration

`float xyz[];`

array declaration with initialization

`int abc[]={10,20,30,40,50,60};` declaration with initialization

memory creation for array in java

`int xyz[]=new int[10];` xyz is a type of int array which can hold 10 number of type int.

array variable value start with index with 0.

Default value for array variable

int family → 0

float family 0.0

char → space character

boolean → false

retrieve element using for each or enhanced loop

syntax

```
for(datatype variableName : arrayName) {
```

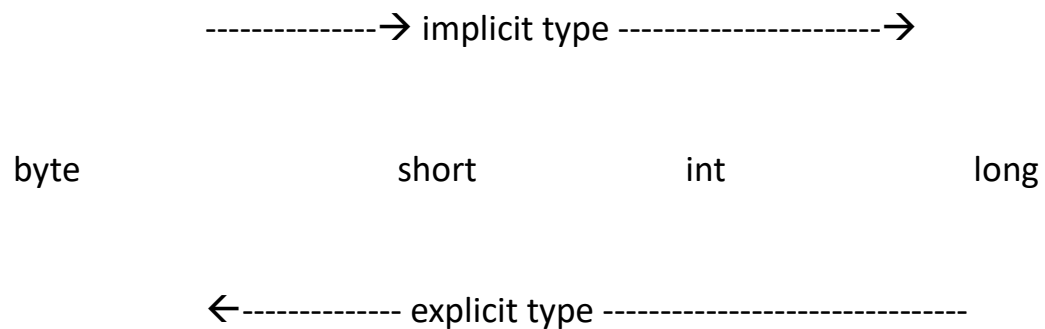
```
}
```

**Type casting** : converting from one data type to another data type is known as type casting.

2 types

1. implicit type casting
2. explicit type casting

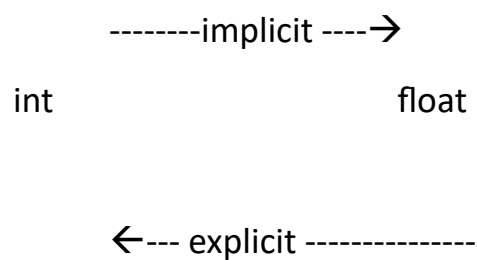
int family



```
byte a=10;  
short b=a;           // implicit type casting
```

```
short c = 10;  
byte d = c;         Error  
byte d = (byte)c;     // explicit type casting
```

int to float



By default any decimal number in java double consider.