Methods

- A block of code which execute when it is called.
- Use to perform certain actions.
- Also known as function, behavior, action.

Types of Methods:



Simple method: method which not receive or return any value.



```
Case: write program for addition of two numbers.

Addition → Entity/ class

x
y

States / variables

add() → Behaviors/ methods
```

```
Addition
                                       public class Lecture
class
   int x=10, y=20;
                                          public static void main(String args[])
   void add()
                                             Addition p;
                                             p = new Addition();
      System.out.println(x+y);
                                            -p.add(); // 30
                                             p.x = 40;
                                             p.y = 60;
                                            p.add(); // 100
    \mathsf{DX}
     null
р
              Х
                  10 40
                 20 60
              add()
```

<u>Method Receiving value(parameterized method):</u> method which receive some value.

```
datatype name(parameter_list)
{
      // code
}
```

```
public class Lecture
class Addition
                                         public static void main(String args[])
   int x,y;
   void add(int a, int b)
                                            Addition p = new Addition();
                                            p.add();
                                            p.add(10,20);
                                            System.out.println(p.x + p.y); //30
     0x24
              Х
                                10
                             а
              у
                             b
                                20
              add(2)
              OXZI
```

Method Returning value: method which return value when we call it.

```
int, float,
    double,
    boolean,
    char,
    String

datatype name() // name start with small letter
{
    return value/variable;
}
```

Method Receiving and Returning value: method which receive and return value when we call it.

```
int, float,
double,
boolean,
char,
String
datatype name(parameter_list)
{
    return value/variable;
}
```

```
public class Lecture
class
       Addition
   int x,y;
                                         public static void main(String args[])
             10
  ,int add(int a, int b)
                                            Addition p = new Addition();
                                            int c = p.add(10, 20);
      x = a;
      y = b;
      return x+y;
                                            System.out.println(c); // 30
                                         }
              Х
     0x24
                            а
р
              У
                           b
              add(2)
```

Exercise 1 (simple method):

Animal class contain two variables named as name, age and assign values "ZEBRA", 20 respectively. and a display() function which display values of name and age. Create an instance of Animal and call display method.

Exercise 2 (parameterized method):

Animal class contain two variables named as name, age and a setValue() function through which we update values of name and age. Create an instance of Animal and pass value by setValue() function as "ZEBRA", 20 and assign to name and age respectively. Then display values of name and age.

Exercise 3 (returning method):

Animal class contain variable named as name and method display() which return name of animal. Create an instance of Animal and assign value "ZEBRA" to name by instance. Then display values of name by calling display() method.

Exercise 4 (Receiving and returning value):

Animal class contain variable named as age and a display() function which update value of age and then return age. Create an instance of Animal and pass value by display() function as 20 and assign to age, also display the returning result.

Exercise No.3: make all types of methods in Board, Laptop and Cellphone program.