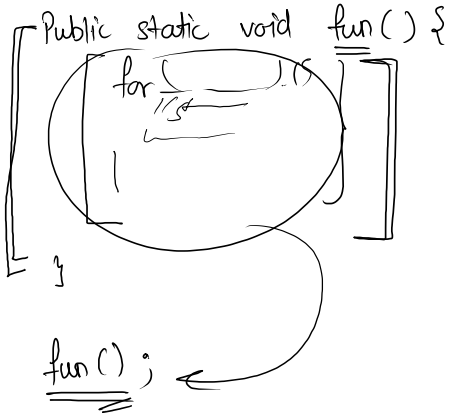
⇒ functions

↳ functions are something which is used to bind a piece of code and we it accordingly.



main() :- main function is going to get executed at very first time.

declare a function :- function definition

calling a function :- using that function

main func

```java
public static void main(String[] args) {
    sayhi();   // function calling
}
```

func

```java
public static void sayhi() {    // function decalaration
    System.out.println("Hi !!!");  int a;
}
```

↳ Return type

when a function get destroyed it returns some output called as return type.

void → nothing
int → 1, 2, -3, 5
char → 'a', 'A', 'c'
string → "Ku"
boolean → false
double → 2.3
float → 2.4

```java
public static void main(String[] args) {
    int a = sayhi();   // function calling
    System.out.println(a);
}

public static int sayhi() {    // function decalaration
    System.out.println("Hi !!!");
    return 0;   // destroy
}
```

m/m
a 0

{ kills the function or destroy

console
Hi!!!
0

→ diff. b/w void type f^n & return type f^n's

Parameters :- values passed in fn

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int salary = scn.nextInt();
    int years = scn.nextInt();

    // int ans = solve(years, salary);
    // System.out.println(ans);

    System.out.println(solve(years, salary));
}

public static int solve(int years, int salary) {
    int bonus = 0;
    if (years > 5) {
        bonus = (5 * salary / 100);
    }
    return bonus;
}
```

parameters are different variables but having same value as of parent fn.

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int salary = scn.nextInt();
    int years = scn.nextInt();

    int ans = solve(years, salary);
    System.out.println(ans);

    // System.out.println(solve(years, salary));
}

public static int solve(int y, int s) {
    int bonus = 0;
    if (y > 5) {
        bonus = (5 * s / 100);
    }
    return bonus;
}
```

Ques Input 2 values and swap them.

int a = 50
int b = 60

a = 6, b = 5

Syso (a + ", " + b);

Ans

```java
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int a = scn.nextInt();
    int b = scn.nextInt();
    System.out.println("First value : " + a + ", Second value : " + b);
    // task is to swap values of variables
    swap(a, b);
}

public static void swap(int x, int y) {
    int temp = x;
    x = y;
    y = temp;

    System.out.println("First value : " + x + ", Second value : " + y);
}
```

```
Finished in 142 ms
First value : 5, Second value : 6
First value : 6, Second value : 5
```

Print "even" or "odd" from a list of integers

```java
public static void solve(int num) {
    if ( num % 2 == 0 ) {
        System.out.println("even");
    } else {
        System.out.println("odd");
    }
}

public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    while (n-- > 0) {
        int num = scn.nextInt();
        solve(num); // main logic
    }
}
```

n = 5

10 → even
9 → odd
8 → even
4 → even
3 → odd

n = 5 4 3 2 1 0

3 > 0

```java
public static void solve1(int num) {
    if ( num % 2 == 0 ) {
        System.out.println("even");
    } else {
        System.out.println("odd");
    }
}

public static void solve() {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    while (n-- > 0) {
        int num = scn.nextInt();
        solve1(num); // main logic
    }
}

public static void main(String[] args) {
    solve();
}
```