- **Flow chart :-**
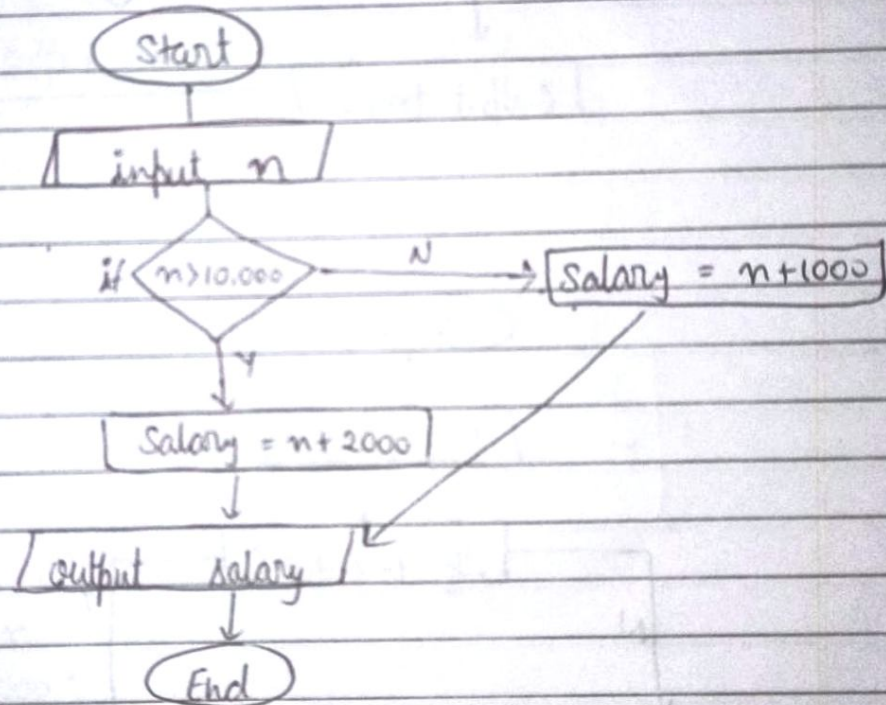 used to visualize our thought process.
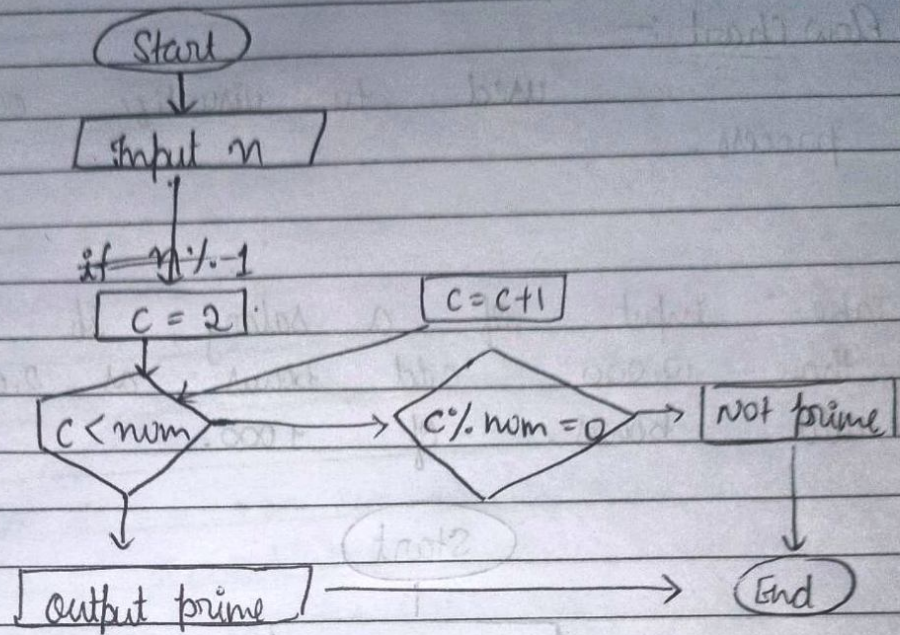
① Take input of a salary, if it's greater than 10,000 add bonus of 2,000 otherwise add bonus of 1,000.
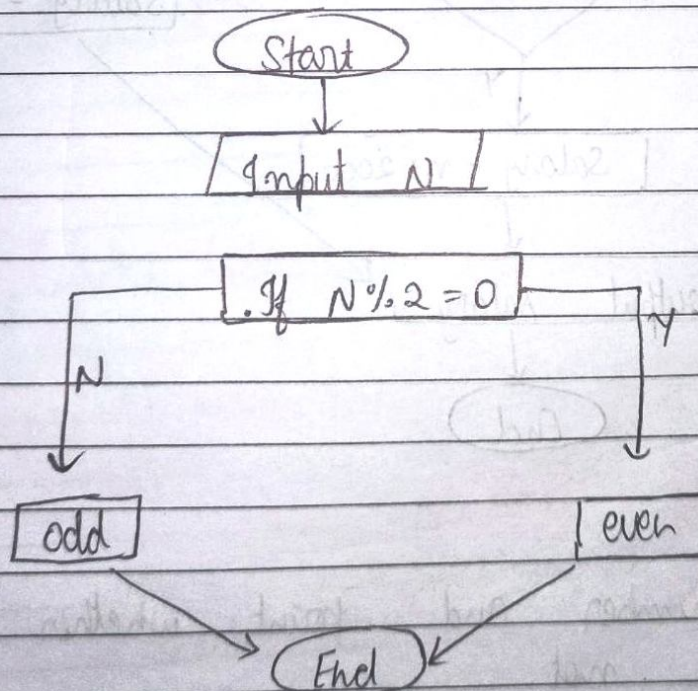
```
                    ( Start )
                       |
                [  input  n  ]
                       |
              if < n > 10,000 >  ---N---→  [ Salary = n + 1000 ]
                       |                          |
                       Y                          |
                       |                          |
           [ Salary = n + 2000 ]                  |
                       |                          |
                       ↓                          |
           [ output   salary ] ←─────────────────
                       |
                    ( End )
```

② Input a number and print whether it is prime or not.

③ Input a number and print it's odd or even.

Start

Input n

if n%-1

C = 2   C = C+1

C < num → C% num = 0 → Not prime

Output prime → End

Start

Input N

. If N%2 = 0

N   Y

odd   even

End

- **Pseudo Code :-**

$①$ write the preudo code for checking the prime no.

$↳$

Start the program.
input num
$c = 2$ { because prime is divisible by 1 }
while $c <$ num :
    if $n \% c = 0$:
        output not prime. exit.
    $c = c + 1$:
end while
output is prime.
Exit.

$②$ Pseudo Code for flow chart problem 1.

$↳$

    Start
    input n
if $n > 10000$:
    $n = n + 2000$

    else :
        $n = n + 1000$

    exit.

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- <u>Data - types</u> :-

(i) <u>Premitive data - type</u> :- Those data type which we cannot break into another data type are known as premitive data type. String is not a premitive data type.

  i) int
  ii) char
  iii) float
  iv) double
  v) long
  vi) boolean.
  ~~vii)~~

  → Identifier

  <u>int a = 10;</u> , literals.

- If you are asking for integer in program and giving the float, that won't work. But if you're asking for float and giving the int that will work. Because float is greater than integer.

- Typecasting :-
  Changing the type of the variable is known as typecasting.

- Float into int :-

```
int n = (int) (68.346f);
Syso (n);
```

Q> what is floating point error ?

Ans> Round off error made by float data type is known as floating point error. Due to it's limitation of range. So we should use double data types.

- automatic type promotion in expressions.

```
int a = 260;
byte b = (byte) (b);
Syso (b);
// it will give the output 4 because
   the range of byte is 256.
```

#.
```
int number = 'a';
Syso (a);
// output will be the output of
   ascii value of small a.
```

```
#→      byte    b   =   42;
        char    c   =   'a';
        short   s   =   1024;
        int     i   =   50,000;
        float   f   =   5.67f;
        double  d   =   0.1234;
        double  result = (f*b) + (i/c) - (d-s);
        Syso (result);
```

Output → byte will be change into float. because float is bigger one.
char will be change into int.
Short will be change into double.

↳   1777. 0166146.

It is Known as automatic type conversion. which is done by the java only.

• write a basic program for to convert the temprature from C to F.

```
import  java. util. * ;
public class temprature
{
    public static void main (String [] args)
    {
        Scanner  sc  = new Scanner (System. in);
        float tempC  = sc. nextFloat ();

        float temp F  = (tempc * 9/5) + 32;
```

```
            Syso (tempF);
        }
    }
```

② → W.A.P. to calculate simple intrest.

```
    import java.util.*;
    public class assignment
{
    public static void main (String [] args)
{
        Scanner SC = new scanner (System.in)
        int p = SC.nextInt ();
        int n = SC.nextInt ();
        int T = SC.nextInt ();

      * float SI = $ (p* n* T)/100;

        Syso (SI);
    }
}
```

③ → Take input of two no and calculate according the oprators. (+,-,*,/)

```
    import java.util.*;
    public class assignment
{
        public static void main (String [] args)
```

```java
{
    Scanner sc = new Scanner (system.in);
    char symbol = sc.next (). charAt (0);
    int n1 = sc.nextInt ();
    int n2 = sc.nextInt ();

    if (symbol == '+')
    {
        syso (n1 + n2);
    }
    else if (symbol == '-')
    {
        syso (n1 - n2);
    }
    else if (symbol == '*')
    {
        syso (n1 * n2);
    }
    else {
        syso (n1 / n2);
    }
}
}
```