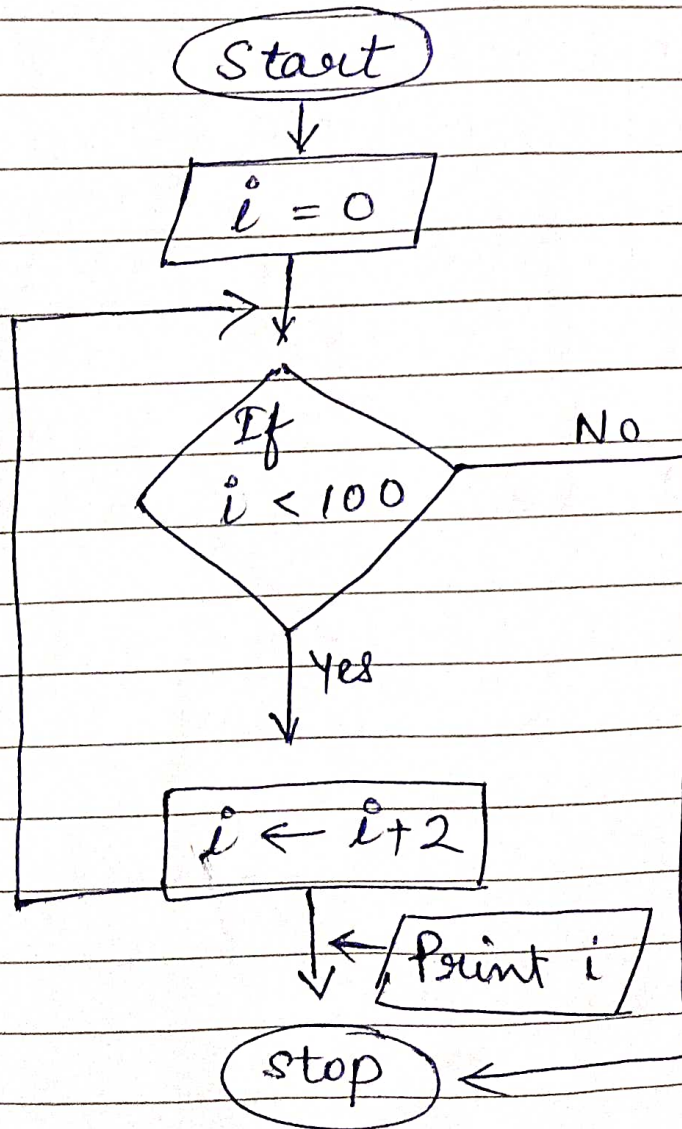# ASSIGNMENT - 2

(a). Step 1 :   Start
Step 2 :   Input $i = 0$
Step 3 :   check if $i < 100$ and
Step 4 :   If $i < 100$ then $i \leftarrow i + 2$
Step 5 :   Stop.

(b)

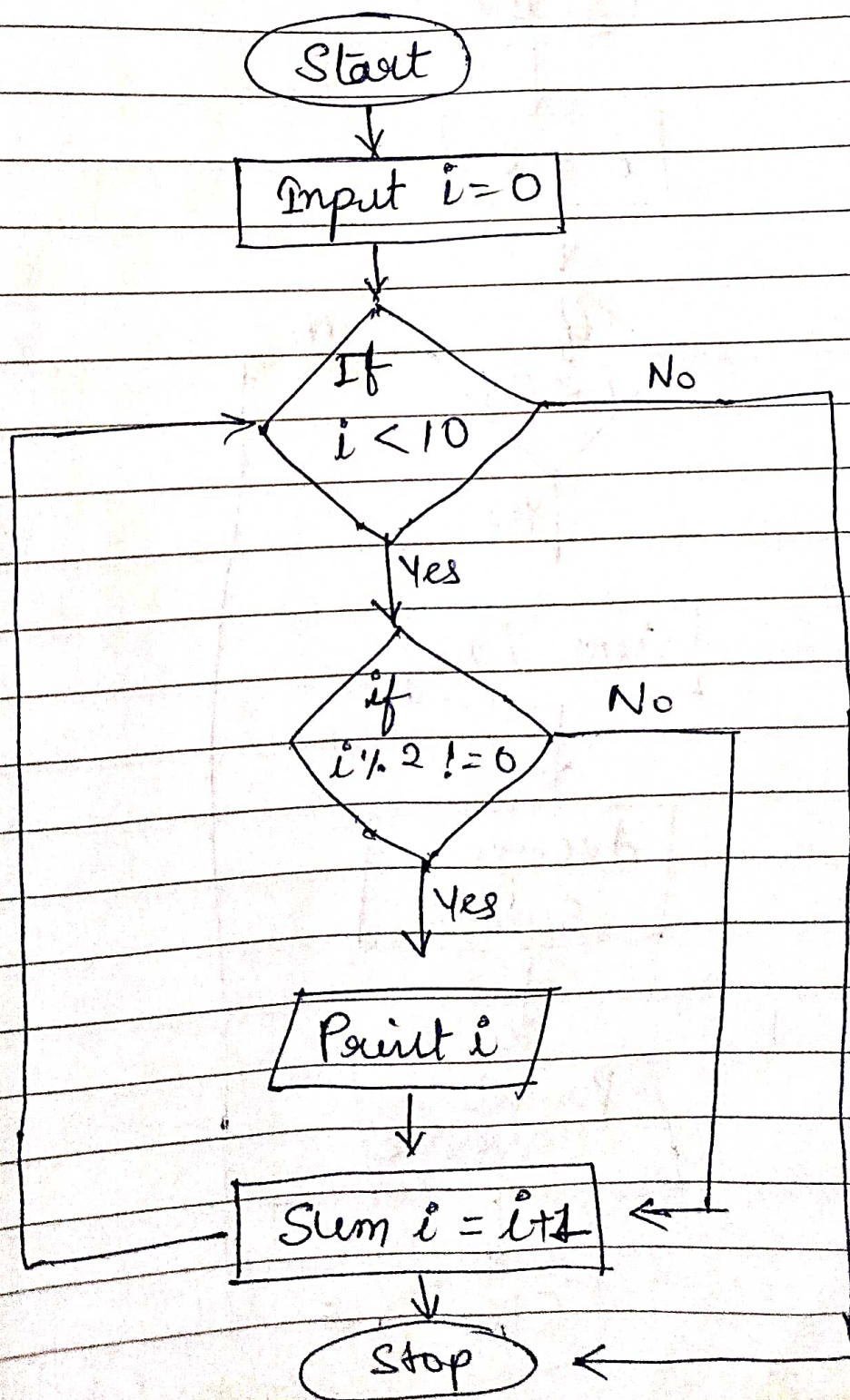Step 1 : Start
Step 2 : Assign $i = 0$
Step 3 : Let or if $i < 10$
Step 4 : if $i < 10$ then $i \% 2 \, != 0$
Step 5 : Print i
Step 6 : Sum $i \leftarrow i + 1$
Step 7 : Stop

```
        ( Start )
            │
            ▼
    ┌───────────────┐
    │  Input i = 0  │
    └───────────────┘
            │
            ▼
          ◇ If
          i < 10 ◇────── No ───────┐
            │                       │
           Yes                      │
            ▼                       │
          ◇ if                      │
          i % 2 != 0 ◇──── No ───┐  │
            │                    │  │
           Yes                   │  │
            ▼                    │  │
    ┌───────────────┐           │  │
    │   Print i     │           │  │
    └───────────────┘           │  │
            │                    │  │
            ▼                    │  │
    ┌───────────────┐           │  │
    │ Sum i = i+1   │ ◄─────────┘  │
    └───────────────┘              │
            │                      │
            ▼                      │
        ( Stop ) ◄─────────────────┘
```
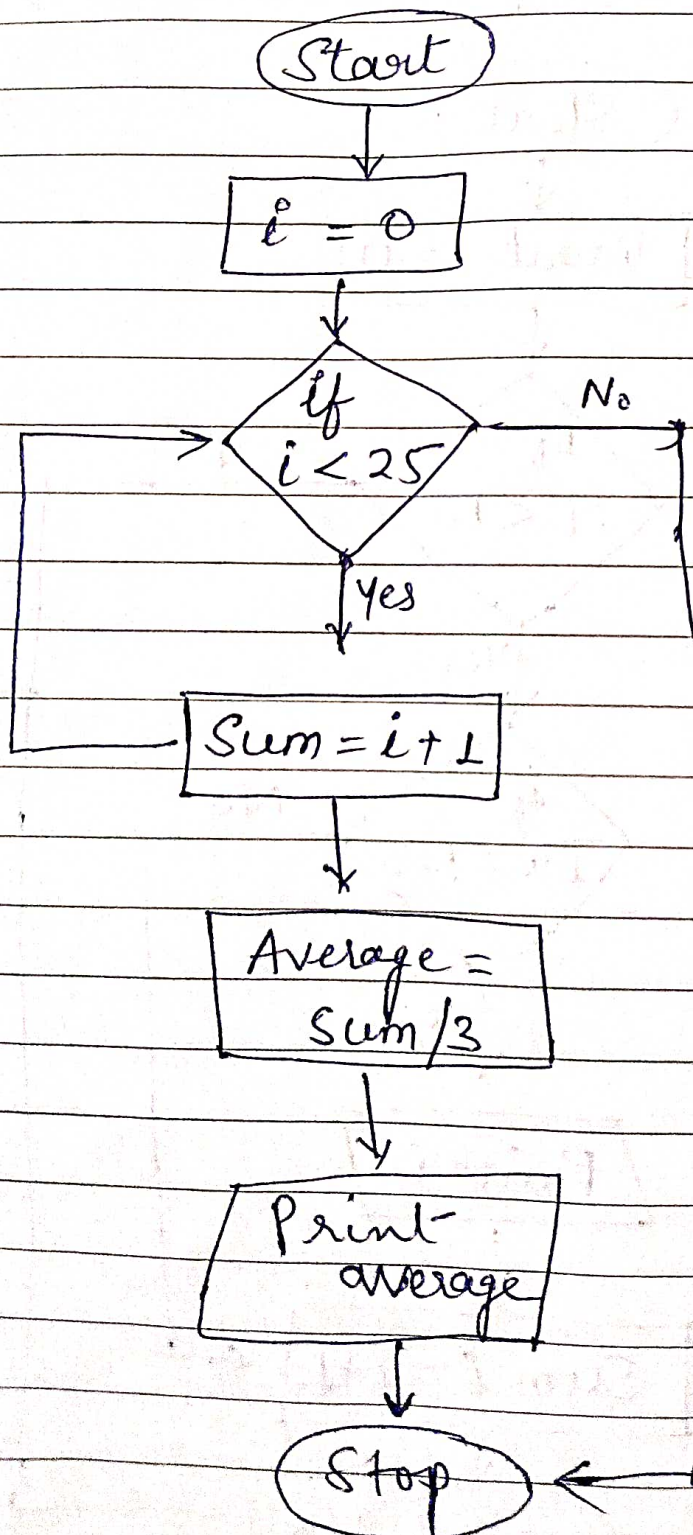
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Step 1 :   Start
Step 2 :   assign $i = 0$
Step 3 :   Check if $i < 25$
Step 4 :   Sum = $i + 1$
Step 5 :   Average = Sum/25
Step 6 :   Print average
Step 7 :   Stop

```
                        ( Start )
                            |
                            v
                    +---------------+
                    |    i = 0      |
                    +---------------+
                            |
                            v
                      /  if   \          No
                     <  i < 25  >----------------+
                      \        /                 |
                          |                      |
                         Yes                     |
                          |                      |
                          v                      |
                  +----------------+             |
            +---->|  Sum = i + 1   |             |
            |     +----------------+             |
            |             |                      |
            |             v                      |
            |     +----------------+             |
            |     |  Average =     |             |
            |     |   Sum/3        |             |
            |     +----------------+             |
            |             |                      |
            |             v                      |
            |     +----------------+             |
            |     |  Print         |             |
            |     |   average      |             |
            |     +----------------+             |
            |             |                      |
            |             v                      |
                    ( Stop ) <-------------------+
```
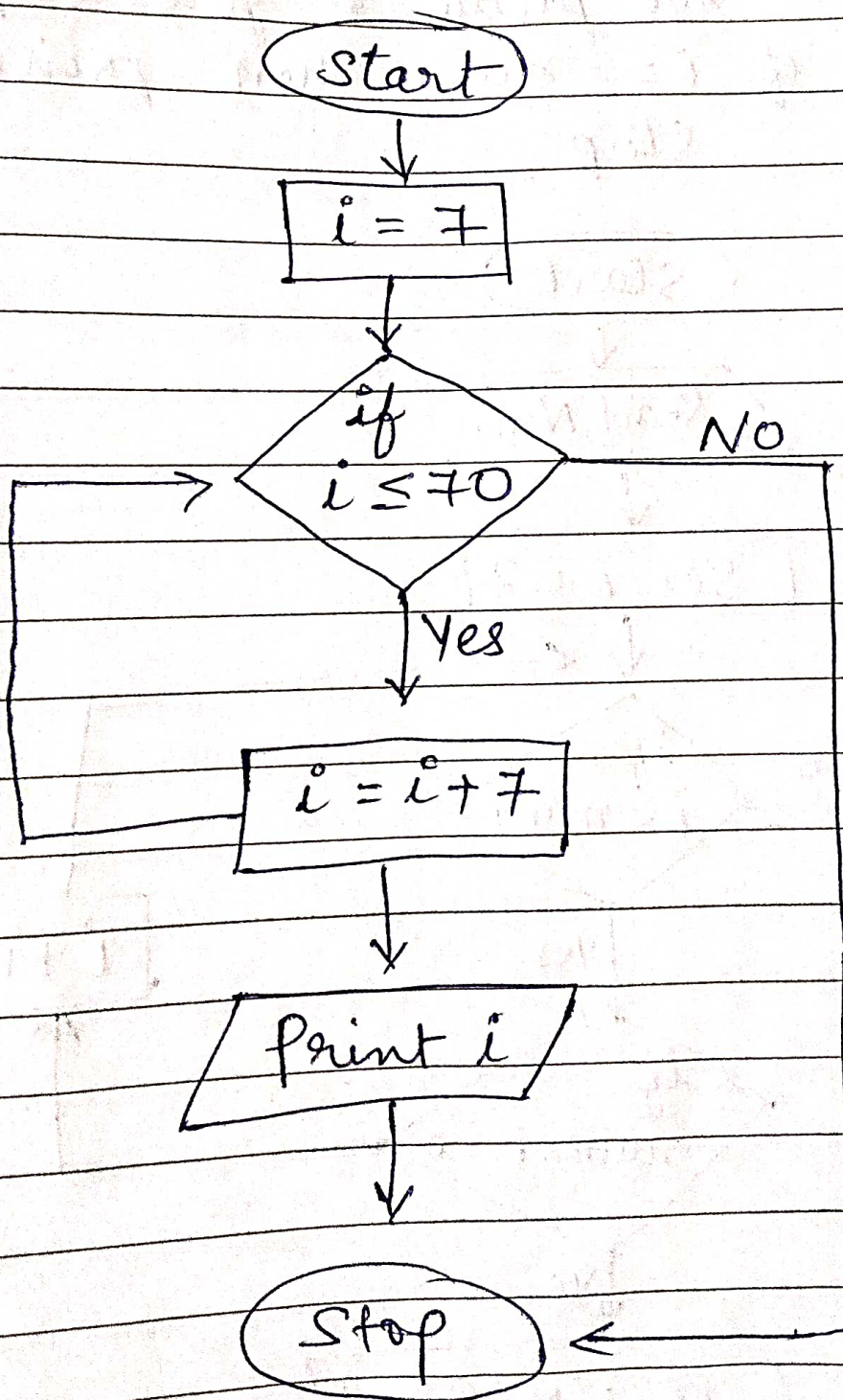
(a)

Step 1 : Start
Step 2 : assign i = 7
Step 3 : check if i ≤ 70
Step 4 : i = i + 7
Step 5 : Print i
Step 6 : Stop

```
        ( Start )
            |
            v
       +---------+
       |  i = 7  |
       +---------+
            |
            v
         / if  \
        < i ≤ 70 >------ No ----+
         \     /                |
            |                   |
           Yes                  |
            |                   |
            v                   |
       +---------+              |
       | i = i+7 |              |
       +---------+              |
            |                   |
            v                   |
       / Print i /              |
            |                   |
            v                   |
        ( Stop ) <--------------+
```
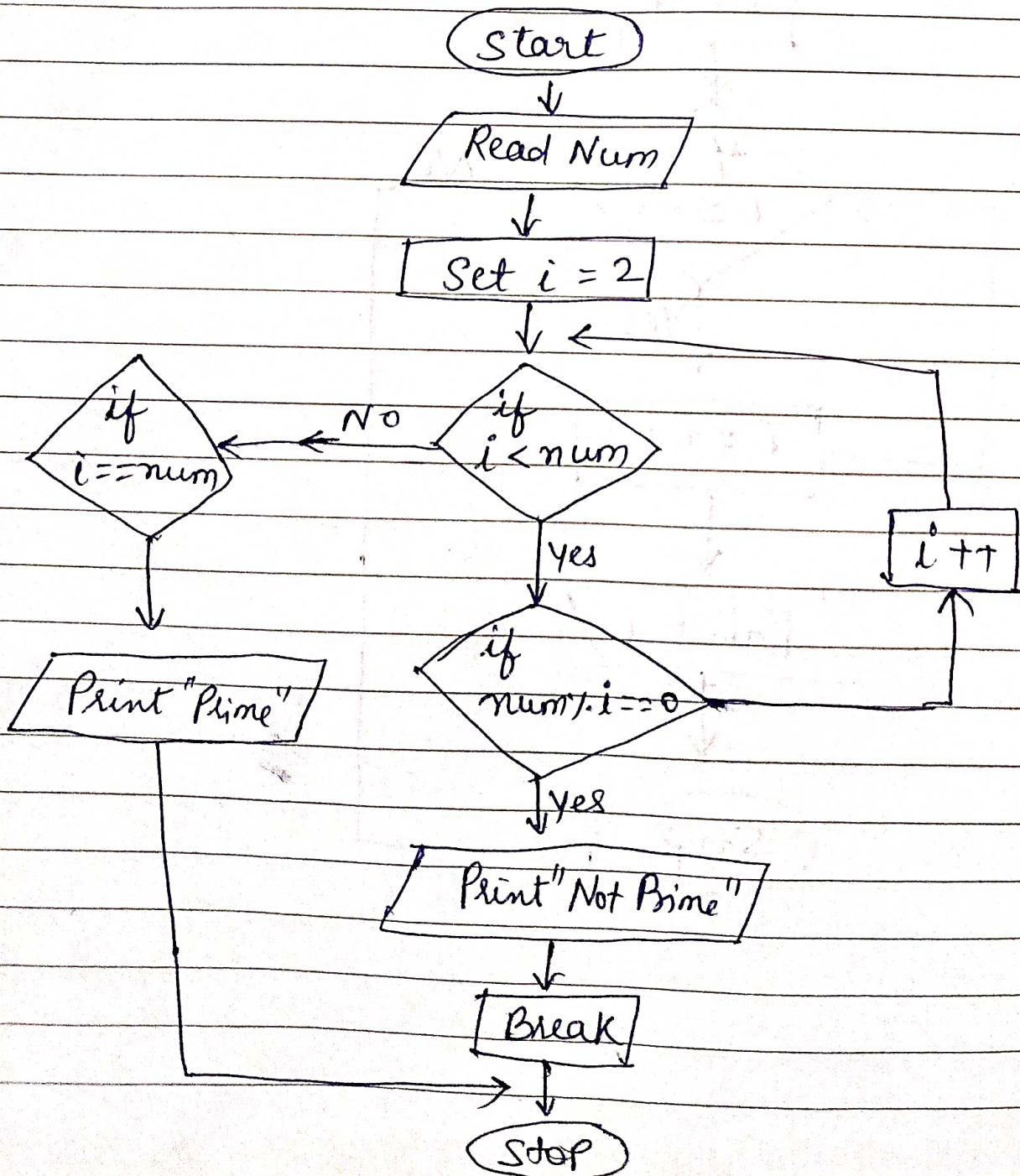
Ⓔ

Step 1 :   Start
Step 2 : Declare num & declare i = 2
Step 3 :   Read num
Step 4 : if i < num goto step 5 else goto
             step 6
Step 5 : if num%.i == 0 then print
             "not prime" & goto step 7
Step 6 : if i == num then print "Prime"
Step 7 :   Stop

(f)

Step 1 :   start
Step 2 :   assign   i = 99
Step 3 :   Check if $i \geq 1$
Step 4 :   if $i \% 2 \, != 0$
Step 5 :   print i
Step 6 :   stop

```
        ( Start )
            |
            v
      [ i = 99 ]
            |
            v
         / if \           NO
        < i >= 1 >  ---------->
         \    /
            | Yes
            v
      / i%2 != 0 \
      \         /
            | Yes
            v
     / Print i /
            |
            v
        ( Stop ) <----
```