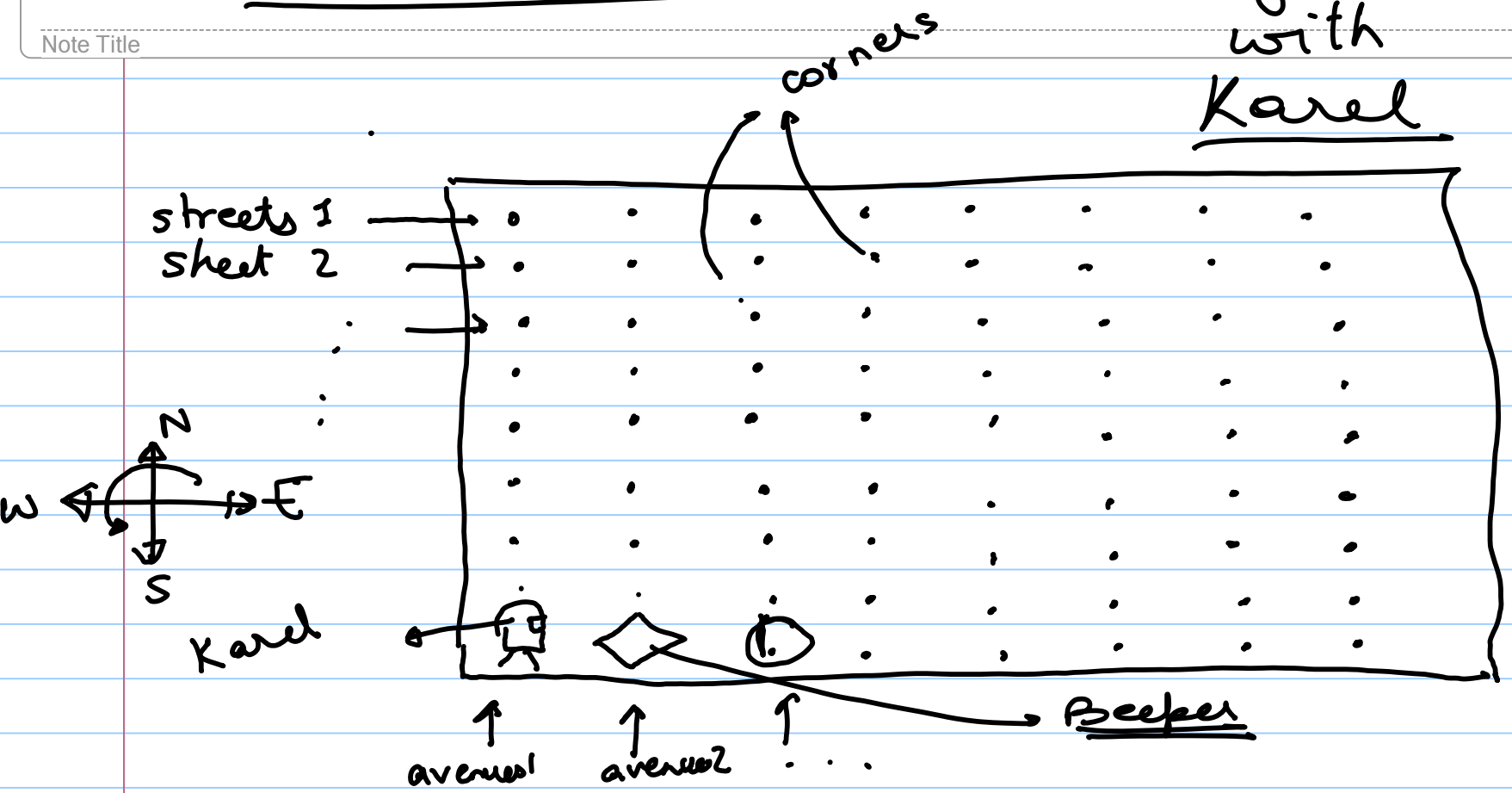
COL 100

Programming with Karel

Note Title 7/26/2018

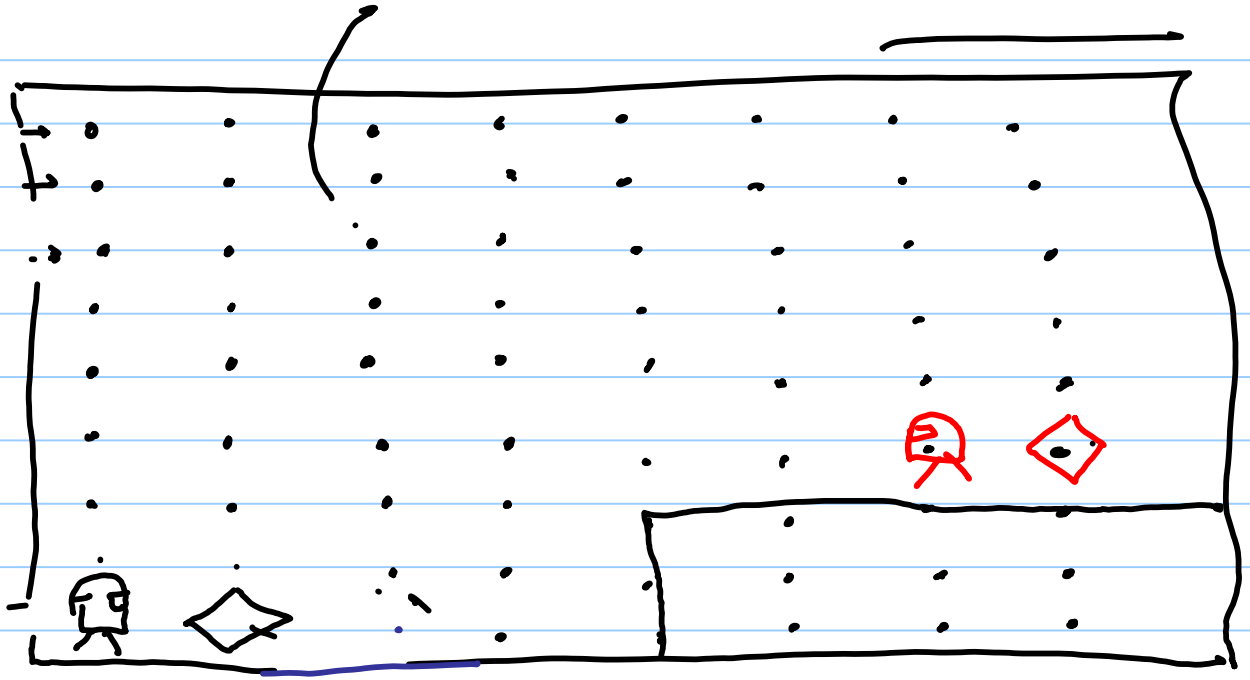


move()
pickBeeper()
putBeeper()
turnLeft()

Program:
move()
pickBeeper()
move()

move
turnLeft
turnLeft
move

functions



```
move()
pickBeeper
move
move
turnLeft
move
move
move
turnLeft
turnLeft
turnLeft
move
move
move
move
```

turnRight

```
move()
pickBeeper
move
```

```
putBeepers
turnLeft
turnLeft
move
```

turnAround

function / procedure:

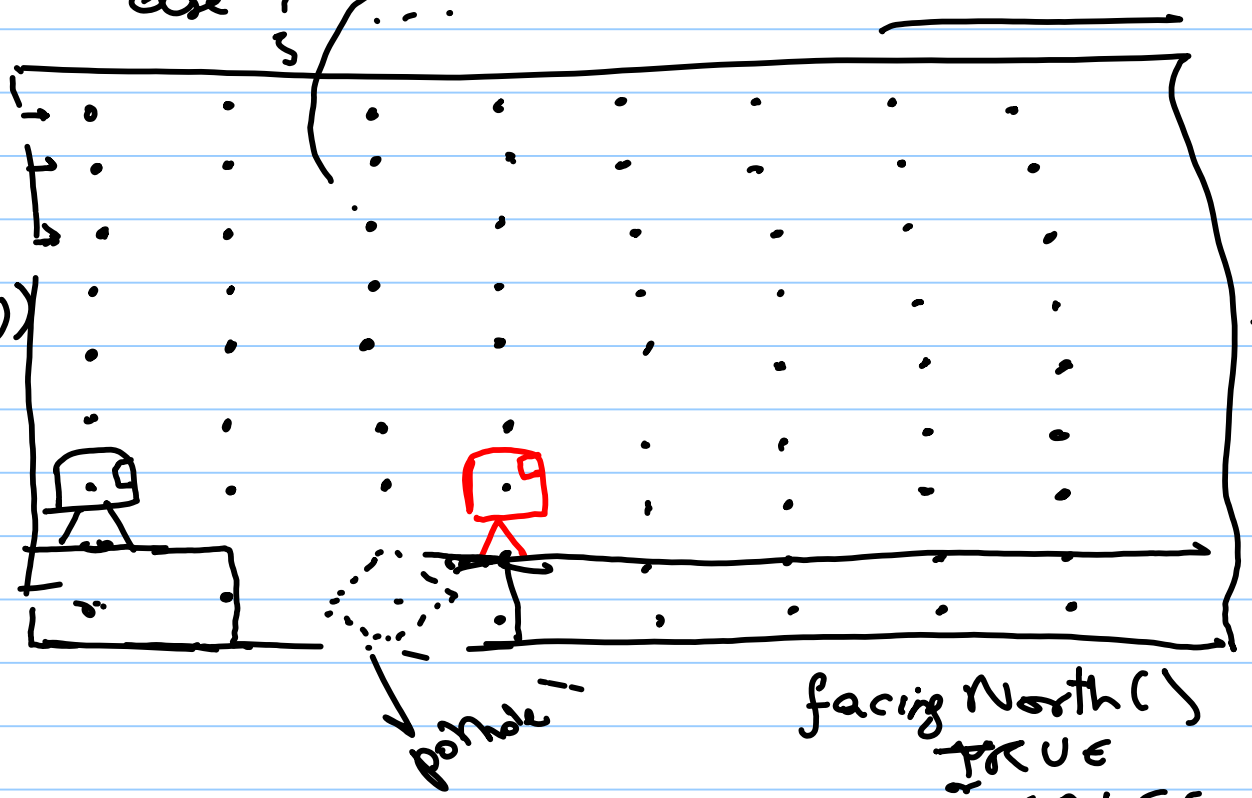
```
define turnRight()
{
    turnAround()
    turnLeft()
}
```

call this function

```
define turnAround
{
    turnLeft()
    turnLeft()
}
```

```
define fillNextPothole
{
  move()
  move()
  turnRight()
  move
  ...
  if (noBeepersPresent())
  {
    putBeeper()
  }
  turnAround()
  move()
  turnRight()
  move()
}
```

```
if (condition)
{
  ....
}
else
{
  ...
}
```



Conditions

- noBeepersPresent()
  - TRUE
  - or
  - FALSE
- frontIsClear()
  - TRUE
  - or
  - FALSE
- facingNorth()
  - TRUE
  - or
  - FALSE

name = " ABCD ... ZY

print "happy birthday " name
print "happy birthday " name

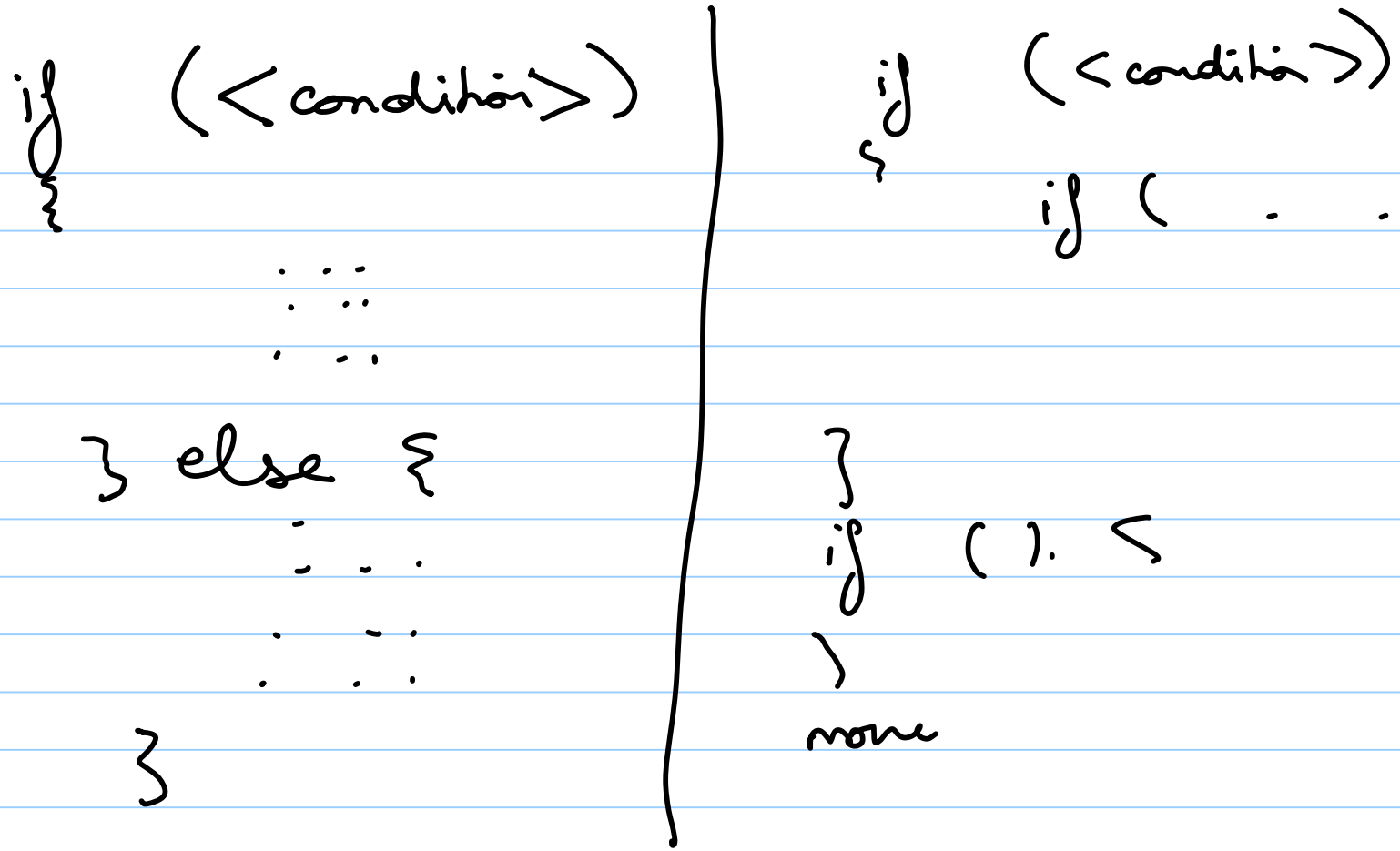
assignment

facingSouth
East
west

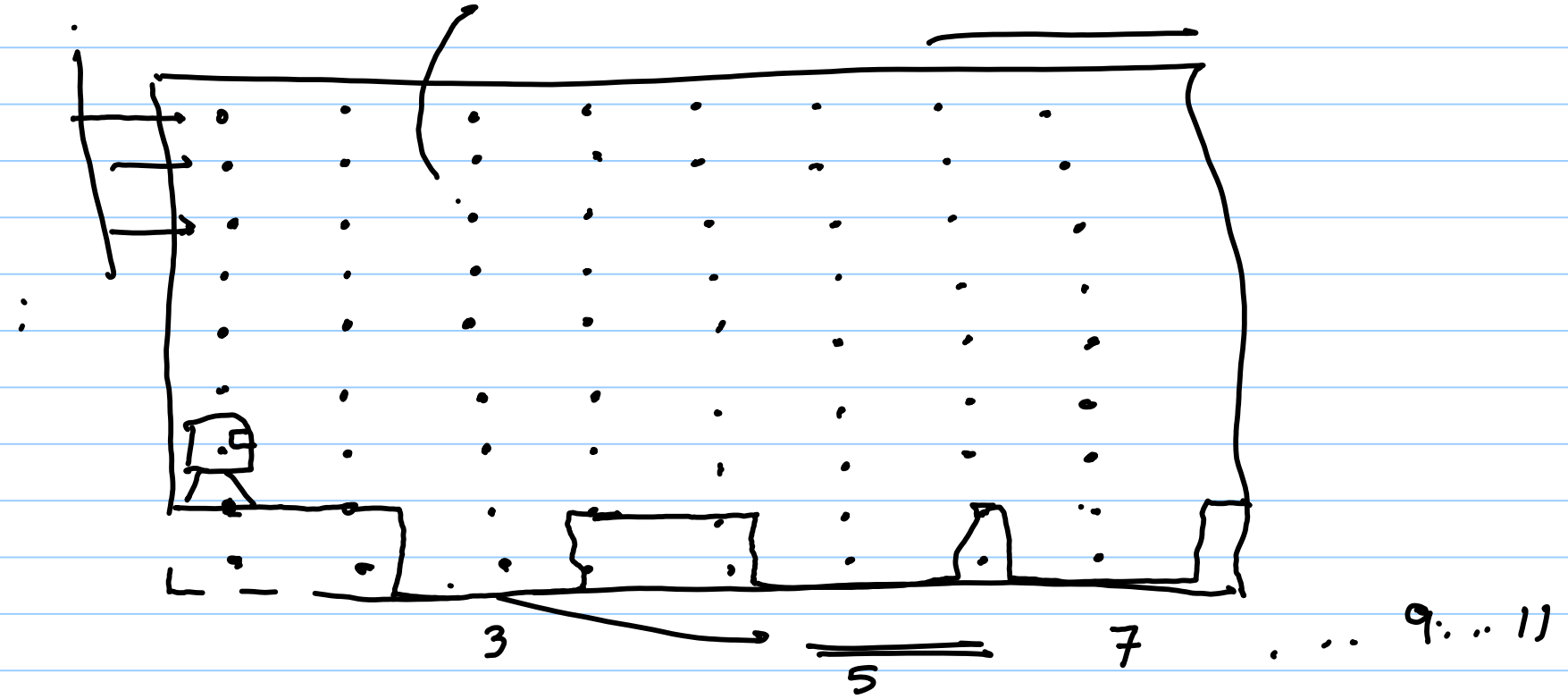
noBeepersPresent()

Variable

define facingEast()
{
turnLeft();
ret = facingNorth()
turnRight()
return ret;
}


if (<condition>)
} else {
}
if (<condition>)
if (. .
}
if ( ). <
)
none

```
define    noBeepersPresent ()
{
        if    (beepersPresent() )
        {
            return  FALSE;
        } else {
            return  TRUE;
        }
}
```


3
5
7
9
11

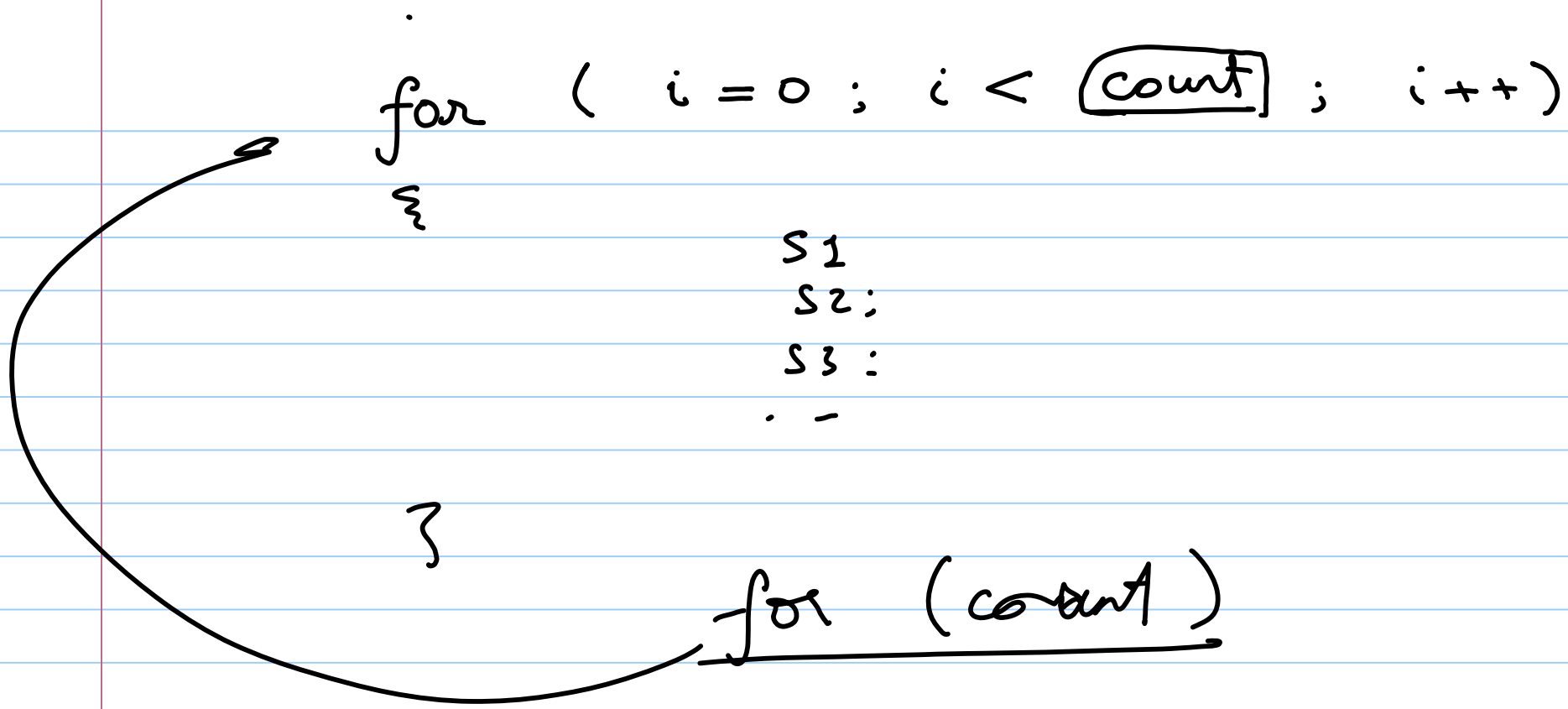
```
if    ( condition )
{
            S1;
            S2;
  } else {
            S3;
            S4;
  }
  S5;
  S6;
```

condition is true then:

S1
S2
S5
S6

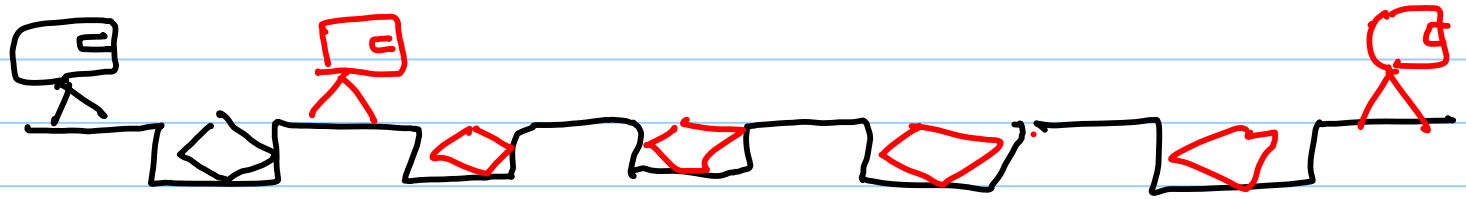
if condition is false:

S3
S4
S5
S6


for (i = 0 ; i < count ; i++)
{
S1
S2;
S3 :
. -
}
for (count)

Repitition

```
for (i = 0; i < 5; i++)
{
    fillNextPothole();
}
```



```
for (i = 0;  i < MaxLength of Street;  i++)
{
        if (frontIsClear())
        {
                move();
        }
}
```

```
while ( condition )
{
        ...   s1
              s2
              :
}
```

```
define moveTillClear() {
    while ( frontIsClear() )
    {
        move();
    }
}
```