example. txt

↓ read

< row column class >

- row Index
- col Index

- setRow
- setCol
- set RowCol (inRow, inCol)

- get Row
- get Col

- print Row Col

< terrain class >

Charcter

- is water
- is land
- is impassable

Charcter

- is Start
- is treasure

- is discovered

- setIsdiscoverd.
- set Is water
- set Is land

:

-

< Map class >

- vector < vector < terrain > > map (rows, vector<terrain> cols, ?)
- Start 정보
- treasure 정보

- Set Terrain At Location

- Get Terr At Location

- Print

< simulation class >

<public>

- get option
- read Map → private Map setting
- Investigation
-

<private>

- Map
- captain_structure : Que or Stack / mate structure : Que or Stack
- deck Sail Container
- deck Quee Container
- Sail Location
  - Search Location
- Hunt Order : "NESW"

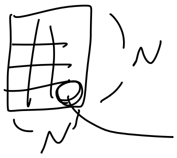
- Is verbose.
- Is stats
- Is Show path

(statistic values)

- total water locations Investigation
- total Land Location Investigated
- total went ashore

— total path length

<Simulation class>
private:
Mapclass map.



- privte
  - size : N
  - vector < terrain >
  - Start point
  - treasure point
- public
  - SetSize.(int)
  - get
  - Set Start point (x, y)
  - get
  - Set Treasure point (x, y)
  - get
  - SetTerrAtLocation
  - getTerrAtLocation

<~~terrain~~ class>
- character : "Island" or "water" or "impossible"
- Is discovered = False.

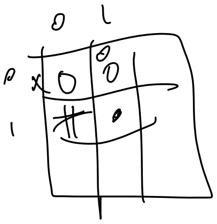
• setTerr(~~[illegible]~~ str, T or F)

public:
• read data( )
- cin : format : M or L
- cin : size : 5.
- map → 5×5 vector ~~[illegible]~~ ~~vector~~

```
- if fmt = M
  ~~vector currTerrain () ..~~
  - getline : 5×M input (input)
    - for i in 5
        for j in 5
          if (input) = 0
              currTerrain (Island, F)
           if (input) = $ : currTerr (island, F), setTreasureCoordinate. (i, j)
          if (input) = . or (a)
              currTerr (water, F)
          if (input) = #
              currTerr (Impass, F)
map. setTerrAtLocation( (i, j), terrain)
```

if fmt = L.

→ map vector 연동



시뮬레이션

Sail-Container Sail-location

Serch- Container Serch- location

```
· Sail- Container : + Start location
        큐에 s Set_sta_locatn
        map. SetTer ( start , tre)
        sail -Contaier + start locatn
        if (sail-Contaier.empty)
            끝 — output
        else

· [Set _ Sail location]
    Sail- locatn = sail- Contaier . front( )
    Sail- Contaier . remove.( )
    mapViewr. SetTem At locatn ( sail -location , True)

· [Investigate_water process]  water
  : hunt order = "NESW"
    (for strig in NESW)
  1)    - if strig = N
```

Investigate under hunt order

```
· RC = Row Colam ( Sail_location.row -1 , Sail_location.col )

- if Step = E.

· RC = Row Colam ( Sail_location.row , Sail_location.col )+1

- if Step = W

· RC = Row Colam ( Sail_location.row -1 , Sail_location.col )-1

- if Step = S

· RC = Row Colam ( Sail_location.row +1 , Sail_location.col )
```

(e.g)

check valid

```
[ Check RC is valid. ]
```

(e.g.)

Add to Contenar

```
- if valid & map.vecter.getTeran (RC).
                                   isMarked = false

      - if map.vecter.getTern (RC).character
            = Land
        Serch_Container + RC.
        map.vecter.setTern (RC , True)
```

```
    - else if    choice = wave
            sail_counter + RC
            mapview . set Ter (RC, Tile)

• [ set_search (location]
    if    search_container . empty.
          do nothing  — output
    else.
          search_location = search_container . front()
          Search_Container . pop

• [  ~~Post Action~~  (add_investigate places]
     P)  for string in (NEWS)
                 ||
                 RC.
     eg)   check RC is valid range
```

```
e.g.]   If valid &   not discard
            & Level.
    - Send content t. RC
    - map level . setTen(RC,T)
    - If  RC = $,
        end
```

output.