

네트워크 프로그래밍 HW6

농업경제학과

2012061020

이장훈

```
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/server
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/server
hun@ubuntu:~/Desktop/NetworkProgramming/hw6/server$ ./hw6_server 12345
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Wrong
Child Process Id : 5237
10
20
30
40
50
60
70
80
75
77
Child Process Id : 5239
Correct
10
```

```
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/client
hun@ubuntu:~/Desktop/NetworkProgramming/hw6/client$ ./hw6_client 127.0.
0.1 12345
insert number (1 to 100) : 1
response : UP
insert number (1 to 100) : 2
response : UP
insert number (1 to 100) : 3
response : UP
insert number (1 to 100) : 4
response : UP
insert number (1 to 100) : 5
response : UP
insert number (1 to 100) : 6
response : UP
insert number (1 to 100) : 7
response : UP
insert number (1 to 100) : 8
response : UP
insert number (1 to 100) : 9
response : UP
insert number (1 to 100) : 10
response : UP
insert number (1 to 100) : 11
response : UP
insert number (1 to 100) : 12
response : UP
insert number (1 to 100) : 13
response : UP
insert number (1 to 100) : 14
response : UP
insert number (1 to 100) : 15
response : UP
insert number (1 to 100) : 16
response : UP
insert number (1 to 100) : 17
response : UP
```

```
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/client
insert number (1 to 100) : 30
response : UP
insert number (1 to 100) : 40
response : UP
insert number (1 to 100) : 50
response : UP
insert number (1 to 100) : 60
response : UP
insert number (1 to 100) : 70
response : DOWN
insert number (1 to 100) : 66
response : Correct
hun@ubuntu:~/Desktop/NetworkProgramming/hw6/client$ ./hw6_client 127.0.
0.1 12345
insert number (1 to 100) : 10
response : UP
insert number (1 to 100) : 20
response : UP
insert number (1 to 100) : 30
response : UP
insert number (1 to 100) : 40
response : UP
insert number (1 to 100) : 50
response : UP
insert number (1 to 100) : 60
response : UP
insert number (1 to 100) : 70
response : DOWN
insert number (1 to 100) : 20
response : UP
insert number (1 to 100) : 65
response : DOWN
insert number (1 to 100) : 64
response : DOWN
insert number (1 to 100) : 63
response : Correct
```

```
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/client
response : UP
insert number (1 to 100) : 17
response : UP
insert number (1 to 100) : 18
response : UP
insert number (1 to 100) : 19
response : UP
insert number (1 to 100) : 20
response : Wrong
hun@ubuntu:~/Desktop/NetworkProgramming/hw6/client$ ./hw6_client 127.0.
0.1 12345
insert number (1 to 100) : 10
response : UP
insert number (1 to 100) : 20
response : UP
insert number (1 to 100) : 30
response : UP
insert number (1 to 100) : 40
response : UP
insert number (1 to 100) : 50
response : UP
insert number (1 to 100) : 60
response : UP
insert number (1 to 100) : 70
response : UP
insert number (1 to 100) : 80
response : DOWN
insert number (1 to 100) : 75
response : UP
insert number (1 to 100) : 77
response : Correct
hun@ubuntu:~/Desktop/NetworkProgramming/hw6/client$ ./hw6_client 127.0.
0.1 12345
insert number (1 to 100) : 10
response : UP
insert number (1 to 100) : 20
```

```
터미널
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/server
Wrong
Child Process Id : 5237
10
20
30
40
50
60
70
80
75
77
Child Process Id : 5239
Correct
10
20
30
40
50
60
70
Child Process Id : 5241
Correct
10
20
30
40
50
60
70
20
65
64
63
Child Process Id : 5245
```

```
hun@ubuntu: ~/Desktop/NetworkProgramming/hw6/client
insert number (1 to 100) : 30
response : UP
insert number (1 to 100) : 40
response : UP
insert number (1 to 100) : 50
response : UP
insert number (1 to 100) : 60
response : UP
insert number (1 to 100) : 70
response : DOWN
insert number (1 to 100) : 66
response : Correct
hun@ubuntu:~/Desktop/NetworkProgramming/hw6/client$ ./hw6_client 127.0.
0.1 12345
insert number (1 to 100) : 10
response : UP
insert number (1 to 100) : 20
response : UP
insert number (1 to 100) : 30
response : UP
insert number (1 to 100) : 40
response : UP
insert number (1 to 100) : 50
response : UP
insert number (1 to 100) : 60
response : UP
insert number (1 to 100) : 70
response : DOWN
insert number (1 to 100) : 20
response : UP
insert number (1 to 100) : 65
response : DOWN
insert number (1 to 100) : 64
response : DOWN
insert number (1 to 100) : 63
response : Correct
```

`/hw6_server 12345` 명령을 내려 서버를 실행시켜 `child` 프로세서를 생성하고 `child` 프로세서가 스무고개 검사 하는 기능을 실행하게 한다. 단 스무고개 검사가 끝나면 부모 프로세서가 자식 프로세서의 프로세서 아이디를 가져와 마지막에 출력 하도록 구현 하였다. 그리고 클라이언트 접속이 끊어져도 계속 스무고개 게임을 할수 있도록 서버가 종료되지 않도록 구현 하였다.

`./hw2_client 127.0.0.1 1234` 명령을 내려 클라이언트가 서버에 접속하여 임의의 숫자에 대해 스무고개를 하며 그 숫자에 대한 정보를 받아와서 추정하여 맞추도록 한다.

20 개 입력후 맞추지 못하면 `wrong`이 뜨고 맞으면 `correct`가 표준 출력 되게 구현(서버도 동일) 1 에서 100 이외의 숫자 예외 처리 해놓음 단 글자입력시 에러가 발생

그림은 먼저 20 번 틀린 값을 입력하여 `wrong`을 출력하고 나머지는 맞는 값을 찾아 가는 그림이다.

서버 구현시 너무 빠르게 진행되면 에러가 발생하여 `usleep`을 이용해 0.001 초에서 0.1 초 사이의 지연을 넣어 안정화 시킴.