



# Dynamic Virtual Resource Managment Program

[ 2018038057 류서현 ]





PRESENTATION

# OVERVIEW

## 프로젝트 환경

## 기본 메뉴 기능

- List Instance
- Available Zones
- Start Instance
- Available Regions

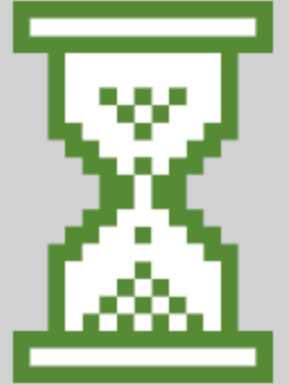
- Stop Instance
- Create Instance
- Reboot Instance
- List Images

## 추가 메뉴 기능

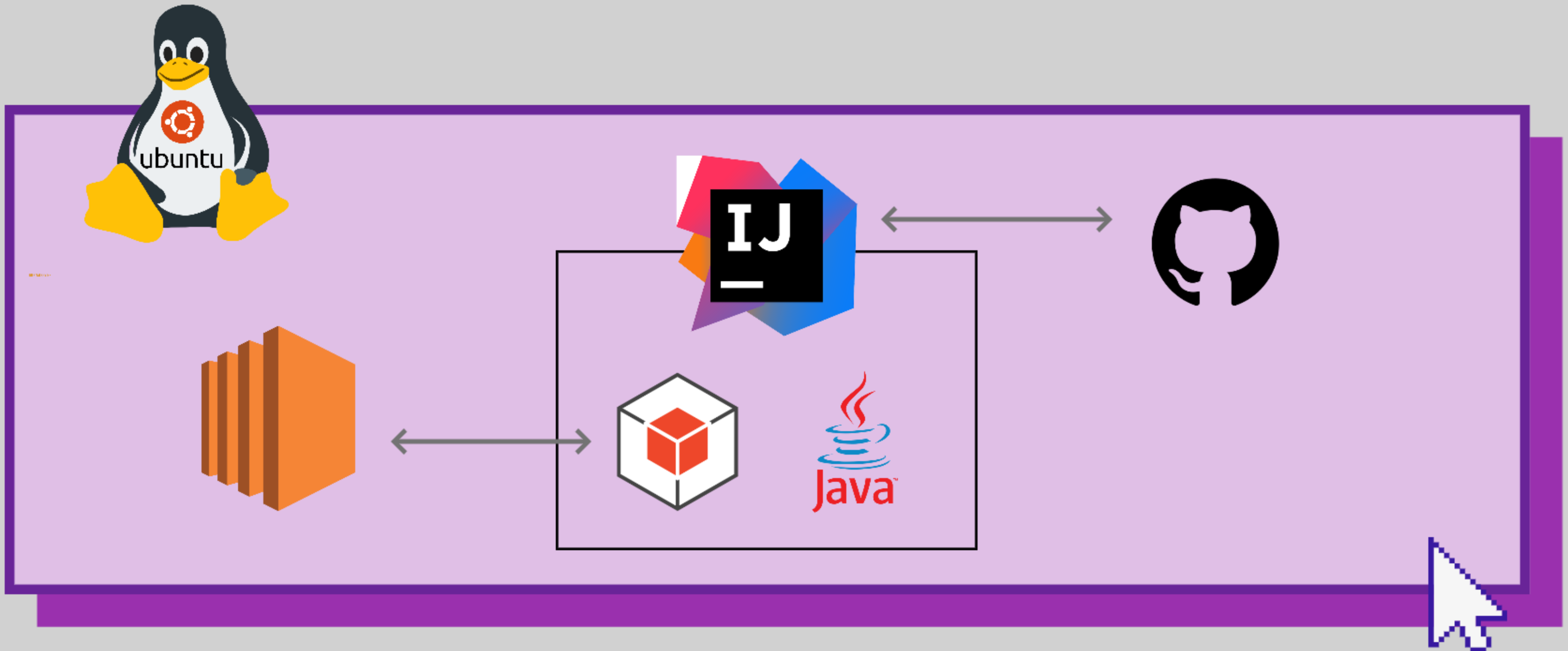
- Terminate Instance
- Search Instance with Status
- Start all instance

- Stop all instance
- List Security Groups
- List Key Pairs

## 시연

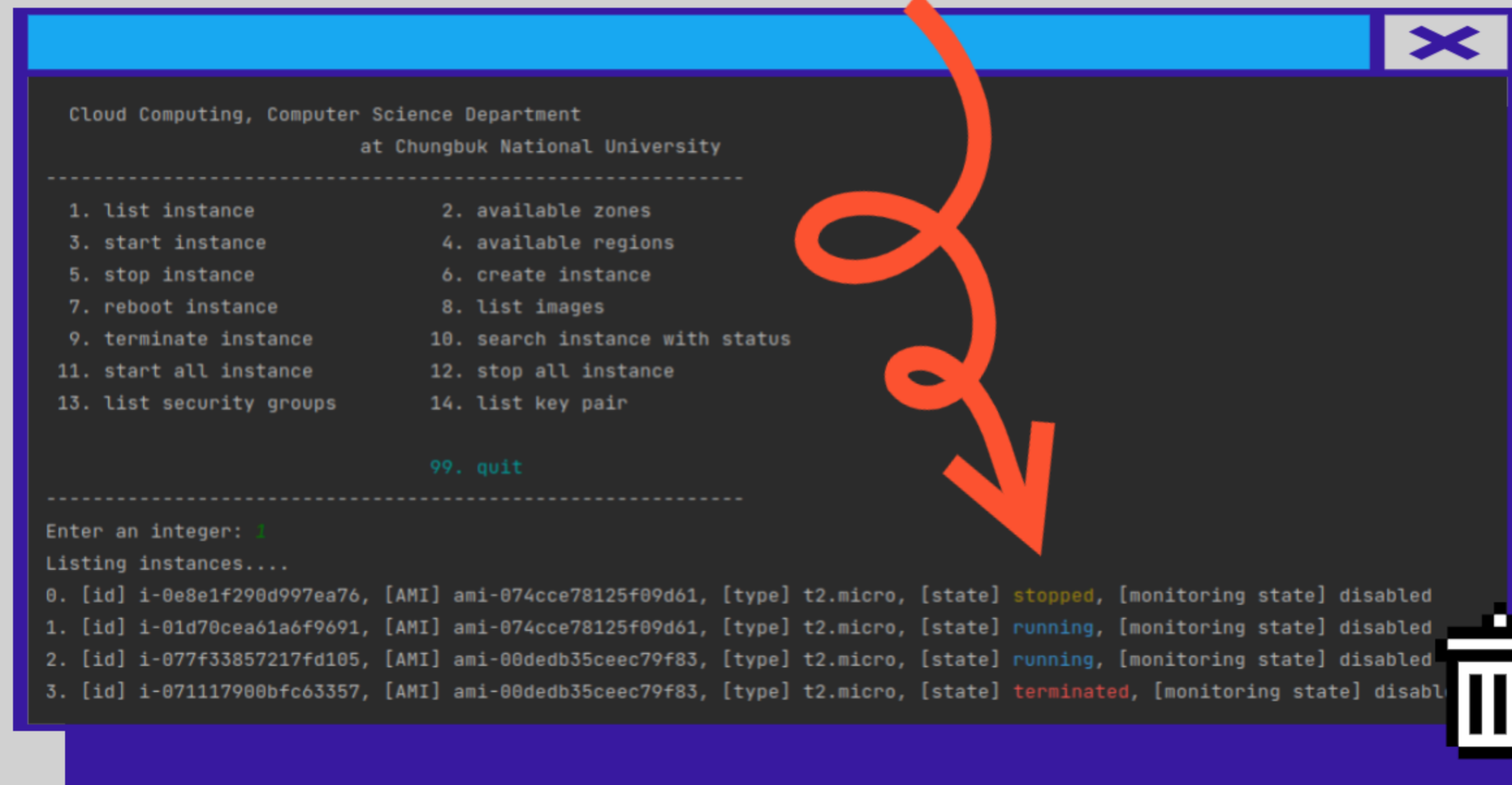


# 프로젝트 환경



# 기본 메뉴 기능

## 01. List instance : 인스턴스 목록을 출력 / 보기 편하게 상태를 색상 표시



```
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-----
1. list instance          2. available zones
3. start instance         4. available regions
5. stop instance          6. create instance
7. reboot instance        8. list images
9. terminate instance     10. search instance with status
11. start all instance     12. stop all instance
13. list security groups  14. list key pair

99. quit
-----
Enter an integer: 1
Listing instances....
0. [id] i-0e8e1f290d997ea76, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] stopped, [monitoring state] disabled
1. [id] i-01d70cea61a6f9691, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] running, [monitoring state] disabled
2. [id] i-077f33857217fd105, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] running, [monitoring state] disabled
3. [id] i-071117900bfc63357, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] terminated, [monitoring state] disabled
```

# 기본 메뉴 기능

02. Available zones : 가용영역(AZ) 목록을 출력

04. Available regions : 리전(지역) 목록을 출력

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```
07. stop instance
7. reboot instance
9. terminate instance
11. start all instance

07. create instance
8. list images
10. search instance with status
12. stop all instance

99. quit

-----
Enter an integer: 4
Available Regions . . .
[region] eu-north-1, [endpoint] ec2.eu-north-1.amazonaws.com
[region] ap-south-1, [endpoint] ec2.ap-south-1.amazonaws.com
[region] eu-west-3, [endpoint] ec2.eu-west-3.amazonaws.com
[region] eu-west-2, [endpoint] ec2.eu-west-2.amazonaws.com
[region] eu-west-1, [endpoint] ec2.eu-west-1.amazonaws.com
[region] ap-northeast-3, [endpoint] ec2.ap-northeast-3.amazonaws.com
[region] ap-northeast-2, [endpoint] ec2.ap-northeast-2.amazonaws.com
[region] ap-northeast-1, [endpoint] ec2.ap-northeast-1.amazonaws.com
[region] sa-east-1, [endpoint] ec2.sa-east-1.amazonaws.com
[region] ca-central-1, [endpoint] ec2.ca-central-1.amazonaws.com
[region] ap-southeast-1, [endpoint] ec2.ap-southeast-1.amazonaws.com
[region] ap-southeast-2, [endpoint] ec2.ap-southeast-2.amazonaws.com
[region] eu-central-1, [endpoint] ec2.eu-central-1.amazonaws.com
[region] us-east-1, [endpoint] ec2.us-east-1.amazonaws.com
[region] us-east-2, [endpoint] ec2.us-east-2.amazonaws.com
[region] us-west-1, [endpoint] ec2.us-west-1.amazonaws.com
[region] us-west-2, [endpoint] ec2.us-west-2.amazonaws.com
```

×

```
99. quit

-----
Enter an integer: 2
Available zones . . .
[id] use2-az1, [region] us-east-2, [zone] us-east-2a
[id] use2-az2, [region] us-east-2, [zone] us-east-2b
[id] use2-az3, [region] us-east-2, [zone] us-east-2c
```

# 기본 메뉴 기능

- 03. Start instance : 인스턴스 ID를 입력하여 해당 인스턴스를 시작
- 05. Stop instance : 인스턴스 ID를 입력하여 해당 인스턴스를 중지 → 1번 메뉴를 통해 바뀐 상태를 확인할 수 있다.
- 07. Reboot instance : 인스턴스 ID를 입력하여 해당 인스턴스를 재부팅

1. list instance

2. available zones

3. start instance

4. available regions

5. stop instance

6. create instance

7. reboot instance

8. list images

9. terminate instance

10. search instance with state

11. start all instance

12. stop all instance

99. quit

Enter an integer: 3

인스턴스 ID를 입력하시오 : i-0e8e1f290d997ea76

Starting i-0e8e1f290d997ea76 . . .

Successfully started instance [i-0e8e1f290d997ea76]

Enter an integer: 5

인스턴스 ID를 입력하시오 : i-0e8e1f290d997ea76

Stopping i-0e8e1f290d997ea76 . . .

Successfully stop instance [i-0e8e1f290d997ea76]

1. list instance

2. available zones

3. start instance

4. available regions

5. stop instance

6. create instance

7. reboot instance

8. list images

9. terminate instance

10. search instance with state

11. start all instance

12. stop all instance

99. quit

Enter an integer: 7

인스턴스 ID를 입력하시오 : i-01d70cea61a6f9691

Rebooting i-01d70cea61a6f9691 . . .

Successfully rebooted instance [i-01d70cea61a6f9691]

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1. list instance

2. available zones



# 기본 메뉴 기능



**06. Create instance** : base가 될 AMI과 새로 생성될 인스턴스의 이름을 입력 / 새로운 인스턴스 생성

**08. List images** : AMI(이미지) 목록을 출력

```
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-----
1. list instance          2. available zones
3. start instance         4. available regions
5. stop instance          6. create instance
7. reboot instance        8. list images
9. terminate instance     10. search instance with status
11. start all instance    12. stop all instance

99. quit

-----
Enter an integer: 8
Listing image....
[ImageID] ami-00dedb35ceec79f83, [Name] htcondor-slave-image, [Owner] 7932390
```



```
top all instance
list key pair

99. quit

-----
Enter an integer: 6
생성할 인스턴스 이름을 입력하시오 : new_slave
이미지 ID를 입력하시오 : ami-00dedb35ceec79f83
Successfully started EC2 instance [new_slave] i-071117900bfc63357 based on AMI ami-00dedb35ceec79f83
```



# 추가 메뉴 구현

## 09. Terminate instance

: 인스턴스 ID를 입력하여  
해당 인스턴스를 종료



```
ro, [state] stopped, [monitoring
ro, [state] running, [monitoring
ro, [state] running, [monitoring
ro, [state] shutting-down, [monit
```



해당 인스턴스가 종료됨

```
-----
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-----

1. list instance           2. available zones
3. start instance         4. available regions
5. stop instance          6. create instance
7. reboot instance        8. list images
9. terminate instance     10. search instance with status
11. start all instance     12. stop all instance
13. list security groups  14. list key pair

99. quit

-----

Enter an integer: 9
인스턴스 ID를 입력하시오 : i-071117900bfc63357
Terminating i-071117900bfc63357 . . .
Successfully Terminated instance [i-071117900bfc63357]
```



# 추가 메뉴 구현

## 10. Search instance with Status

: 필터링을 통해 특정 상태의 인스턴스만  
검색하고 목록을 출력

1을 선택하면 running 상태의 인스턴스만

2를 선택하면 stopped 상태의 인스턴스만  
출력한다.

다른 값이나 숫자가 아닌 값을 입력하면

예외처리에 의해 다시 입력하도록 안내한다.



```
Run - CC_Term_project

awsTest x
-----
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-----
1. list instance          2. available zones
3. start instance        4. available regions
5. stop instance         6. create instance
7. reboot instance       8. list images
9. terminate instance    10. search instance with status
11. start all instance    12. stop all instance
13. list security groups  14. list key pair

99. quit
-----
Enter an integer: 10
검색하고 싶은 인스턴스의 상태를 선택해주세요 ( 1. Running  2. Stopped ) : 1
올바른 입력값이 아닙니다. 재 선택 : 2
0. [id] i-01d70cea61a6f9691, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] running, [monitoring state] disabled
1. [id] i-077f33857217fd105, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] running, [monitoring state] disabled
-----

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-----
1. list instance          2. available zones
3. start instance        4. available regions
5. stop instance         6. create instance
7. reboot instance       8. list images
9. terminate instance    10. search instance with status
11. start all instance    12. stop all instance
13. list security groups  14. list key pair

99. quit
-----
Enter an integer: 10
검색하고 싶은 인스턴스의 상태를 선택해주세요 ( 1. Running  2. Stopped ) : 2
0. [id] i-0e8e1f290d997ea76, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] stopped, [monitoring state] disabled
```



**running instance만 출력**



**stopped instance만 출력**



# 추가 메뉴 구현

11. Start All instance : 모든 인스턴스 시작

12. Stop All instance : 모든 인스턴스 중지

-----  
Enter an integer: 11  
Starting all instances....  
Starting instance [i-0e8e1f290d997ea76] . . .  
Successfully start all instances :)  
  
-----  
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-----  
1. list instance                    2. available zones  
3. start instance                   4. available regions  
5. stop instance                    6. create instance  
7. reboot instance                8. list images  
9. terminate instance            10. search instance with status  
11. start all instance            12. stop all instance  
13. list security groups        14. list security groups  
  
99. quit  
  
-----  
Enter an integer: 1  
Listing instances....  
0. [id] i-0e8e1f290d997ea76, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] pending, [monitoring state] disabled  
1. [id] i-01d70cea61a6f9691, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] running, [monitoring state] disabled  
2. [id] i-077f33857217fd105, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] running, [monitoring state] disabled  
3. [id] i-071117900bfc63357, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] terminated, [monitoring state] disabled  
  
-----

모든 인스턴스가 실행 상태로

↓ ↓ ↓

-----  
Enter an integer: 12  
Stopping all instances....  
Stopping instance [i-0e8e1f290d997ea76] . . .  
Stopping instance [i-01d70cea61a6f9691] . . .  
Stopping instance [i-077f33857217fd105] . . .  
Successfully stop all instances :)  
  
-----  
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-----  
1. list instance                    2. available zones  
3. start instance                   4. available regions  
5. stop instance                    6. create instance  
7. reboot instance                8. list images  
9. terminate instance            10. search instance with status  
11. start all instance            12. stop all instance  
13. list security groups        14. list security groups  
  
99. quit  
  
-----  
Enter an integer: 1  
Listing instances....  
0. [id] i-0e8e1f290d997ea76, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] stopping, [monitoring state] disabled  
1. [id] i-01d70cea61a6f9691, [AMI] ami-074cce78125f09d61, [type] t2.micro, [state] stopping, [monitoring state] disabled  
2. [id] i-077f33857217fd105, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] stopping, [monitoring state] disabled  
3. [id] i-071117900bfc63357, [AMI] ami-00dedb35ceec79f83, [type] t2.micro, [state] terminated, [monitoring state] disabled  
  
-----

모든 인스턴스가 중지 상태로

↓ ↓ ↓

# 추가 메뉴 기능

13. List Security Groups : 보안 그룹 목록을 출력

14. List Key Pairs : 키페어 목록을 출력

×

```
07. stop instance
7. reboot instance
9. terminate instance
11. start all instance

07. create instance
8. list images
10. search instance with status
12. stop all instance

99. quit

-----
Enter an integer: 4
Available Regions . . .
[region] eu-north-1, [endpoint] ec2.eu-north-1.amazonaws.com
[region] ap-south-1, [endpoint] ec2.ap-south-1.amazonaws.com
[region] eu-west-3, [endpoint] ec2.eu-west-3.amazonaws.com
[region] eu-west-2, [endpoint] ec2.eu-west-2.amazonaws.com
[region] eu-west-1, [endpoint] ec2.eu-west-1.amazonaws.com
[region] ap-northeast-3, [endpoint] ec2.ap-northeast-3.amazonaws.com
[region] ap-northeast-2, [endpoint] ec2.ap-northeast-2.amazonaws.com
[region] ap-northeast-1, [endpoint] ec2.ap-northeast-1.amazonaws.com
[region] sa-east-1, [endpoint] ec2.sa-east-1.amazonaws.com
[region] ca-central-1, [endpoint] ec2.ca-central-1.amazonaws.com
[region] ap-southeast-1, [endpoint] ec2.ap-southeast-1.amazonaws.com
[region] ap-southeast-2, [endpoint] ec2.ap-southeast-2.amazonaws.com
[region] eu-central-1, [endpoint] ec2.eu-central-1.amazonaws.com
[region] us-east-1, [endpoint] ec2.us-east-1.amazonaws.com
[region] us-east-2, [endpoint] ec2.us-east-2.amazonaws.com
[region] us-west-1, [endpoint] ec2.us-west-1.amazonaws.com
[region] us-west-2, [endpoint] ec2.us-west-2.amazonaws.com
```

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```
99. quit

-----
Enter an integer: 2
Available zones . . .
[id] use2-az1, [region] us-east-2, [zone] us-east-2a
[id] use2-az2, [region] us-east-2, [zone] us-east-2b
[id] use2-az3, [region] us-east-2, [zone] us-east-2c
```



```
Machines Owner Claimed Unclaimed Matched Preempting Drain
X86_64/LINUX      2      0      0      2      0      0      0
Total            2      0      0      2      0      0      0
[ec2-user@ip-172-31-33-33 ~]$ condor_status
Name                                     OpSys      Arch      State      Activit
ip-172-31-5-63.us-east-2.compute.internal  LINUX      X86_64    Unclaimed  Idle
ip-172-31-32-197.us-east-2.compute.internal  LINUX      X86_64    Unclaimed  Idle
ip-172-31-33-33.us-east-2.compute.internal  LINUX      X86_64    Unclaimed  Idle

Machines Owner Claimed Unclaimed Matched Preempting Drain
X86_64/LINUX      3      0      0      3      0      0      0
Total            3      0      0      3      0      0      0
[ec2-user@ip-172-31-33-33 ~]$ Connection to ec2-18-222-240-213.us-east-2.compute
.amazonaws.com closed by remote host.
Connection to ec2-18-222-240-213.us-east-2.compute.amazonaws.com closed.
```

시연



인스턴스 (3) 정보

인스턴스 필터링				
<input type="checkbox"/>	Name ▾	인스턴스 ID	인스턴스 상태 ▾	인
<input type="checkbox"/>	slave	i-0e8e1f290d997ea76	✔ 실행 중 🔍🔍	t2
<input type="checkbox"/>	master	i-01d70cea61a6f9691	✔ 실행 중 🔍🔍	t2
<input type="checkbox"/>	slave2	i-077f33857217fd105	✔ 실행 중 🔍🔍	t2

