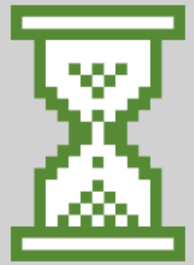
클라우드 컴퓨팅 Term Project

Dynamic Virtual Resource Managment Program

[2018038057 류서현]

PRESENTATION

OVERVIEW



프로젝트 환경

기본 메뉴 기능

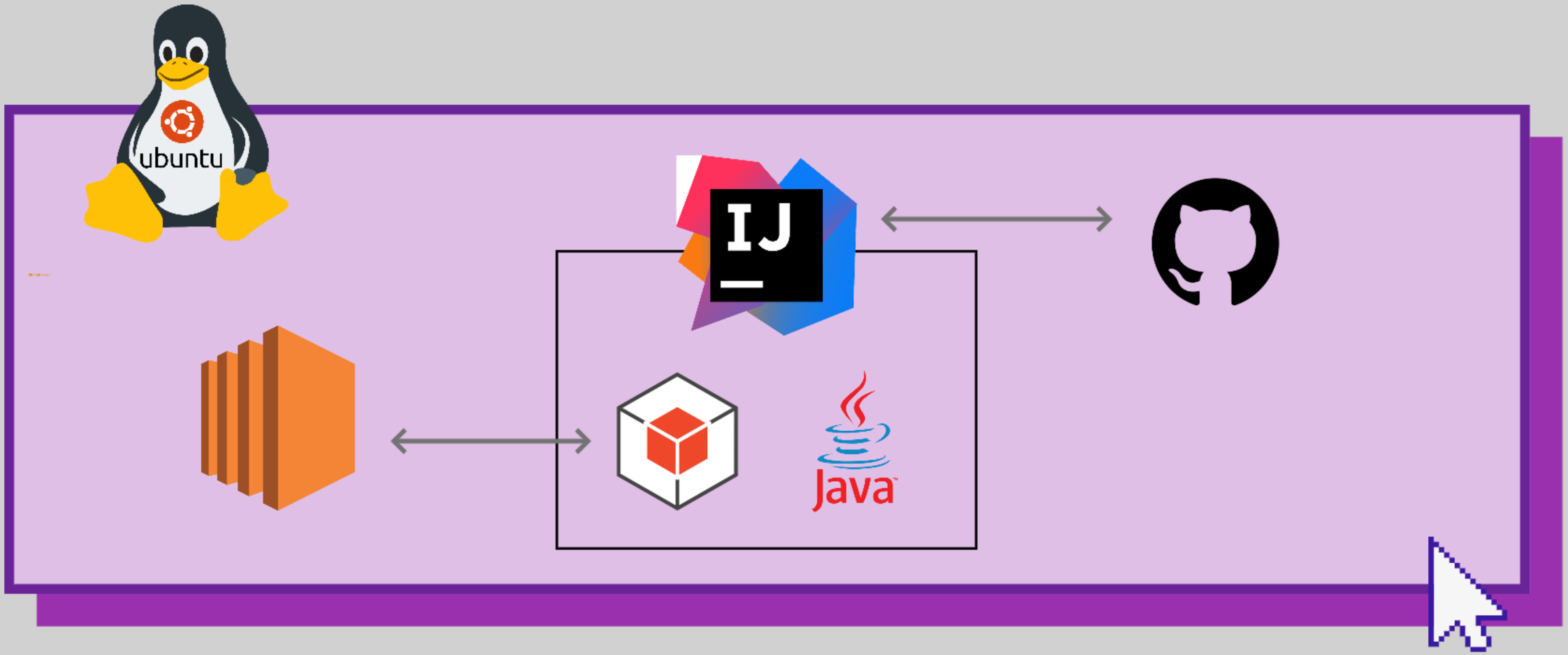
- List Instance
- Available Zones
- Start Instance
- Available Regions
- Stop Instance
- Create Instance
- Reboot Instance
- List Images

추가 메뉴 기능

- Terminate Instance
- Search Instance with Status
- Start all instance
- Stop all instance
- List Security Groups
- List Key Pairs

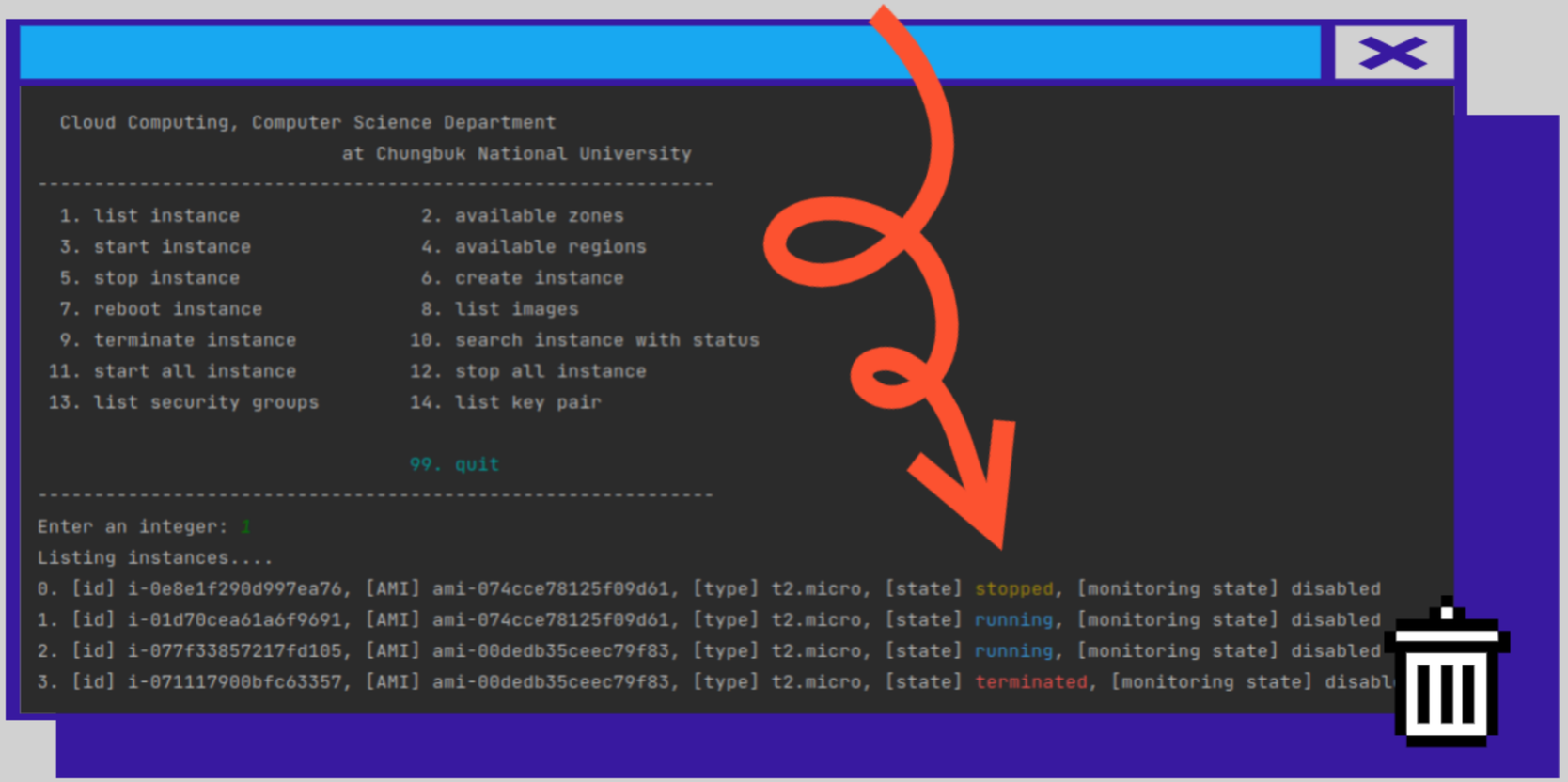
시연

프로젝트 환경



기본 메뉴 기능

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



기본 메뉴 기능

02. Available zones : 가용영역(AZ) 목록을 출력

04. Available regions : 리전(지역) 목록을 출력

```
  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: 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.ama
[region] eu-central-1, [endpoint] ec2.eu-central-1.amazona
[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
```

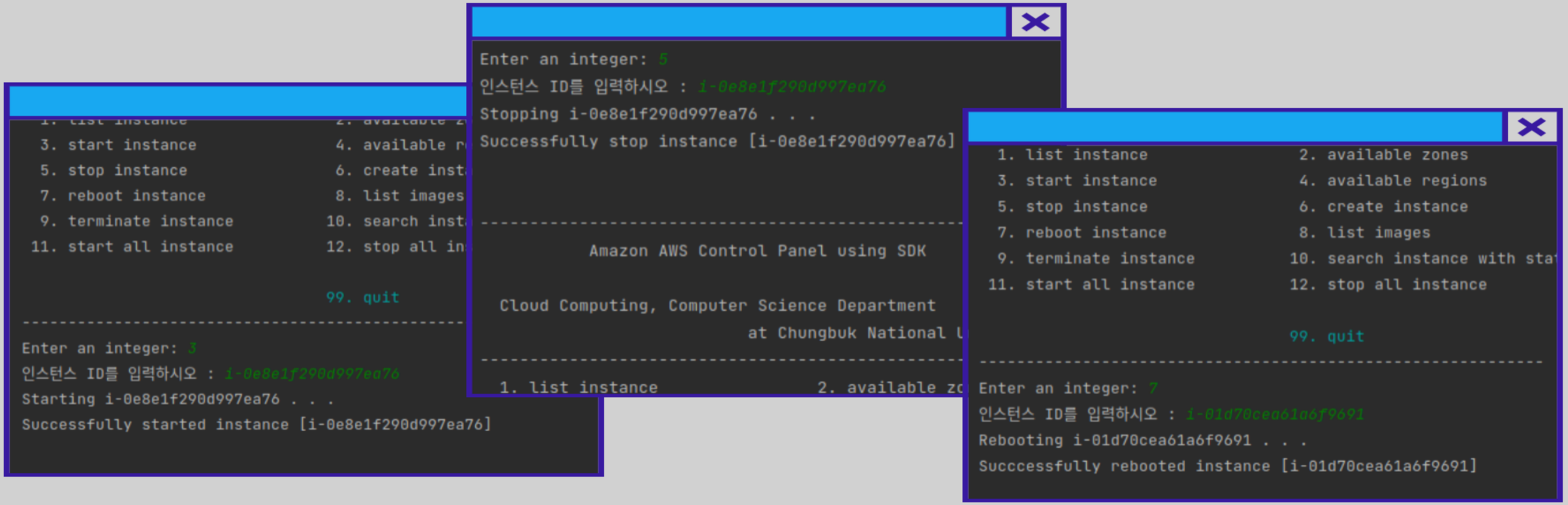
```
                                 99. quit
------------------------------------------------------------
Enter an integer: 2
Available zones . . .
[id] use2-az1, [region] us-east-2, [zone] us-east-2a
[id] use2-az2, [region] us-east-2, [zone] us-east-2b
[id] use2-az3, [region] us-east-2, [zone] us-east-2c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

기본 메뉴 기능

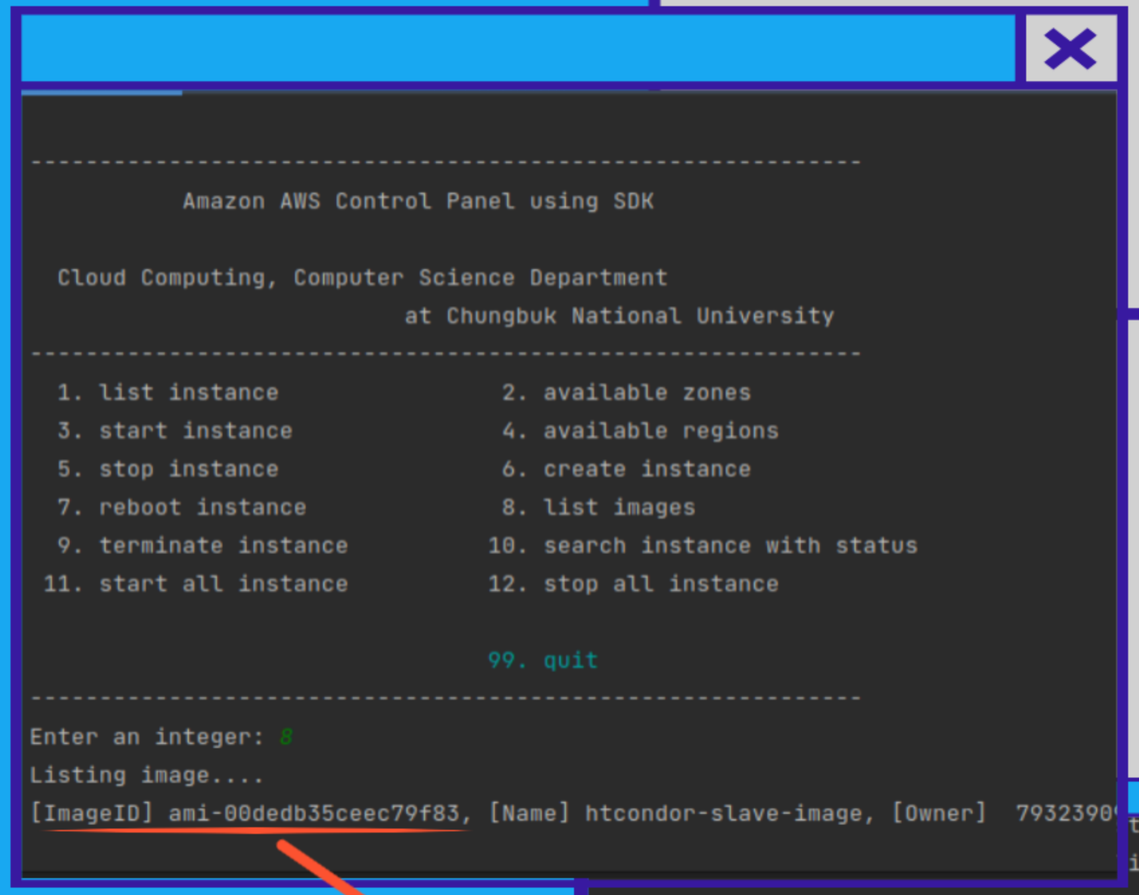
03. Start instance : 인스턴스 ID를 입력하여 해당 인스턴스를 시작

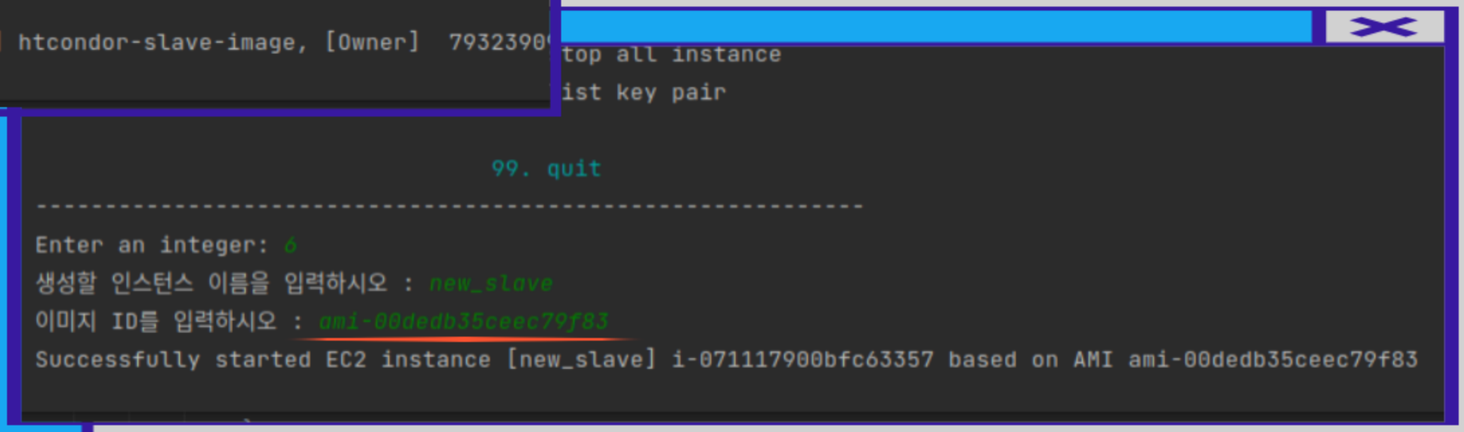
05. Stop instance : 인스턴스 ID를 입력하여 해당 인스턴스를 중지 → 1번 메뉴를 통해 바뀐 상태를 확인할 수 있다.

07. Reboot instance : 인스턴스 ID를 입력하여 해당 인스턴스를 재부팅



기본 메뉴 기능





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

08. List images : AMI(이미지) 목록을 출력

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

```
------------------------------------------------------------
          Amazon AWS Control Panel using SDK

  Cloud Computing, Computer Science Department
                          at Chungbuk National University
------------------------------------------------------------
  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

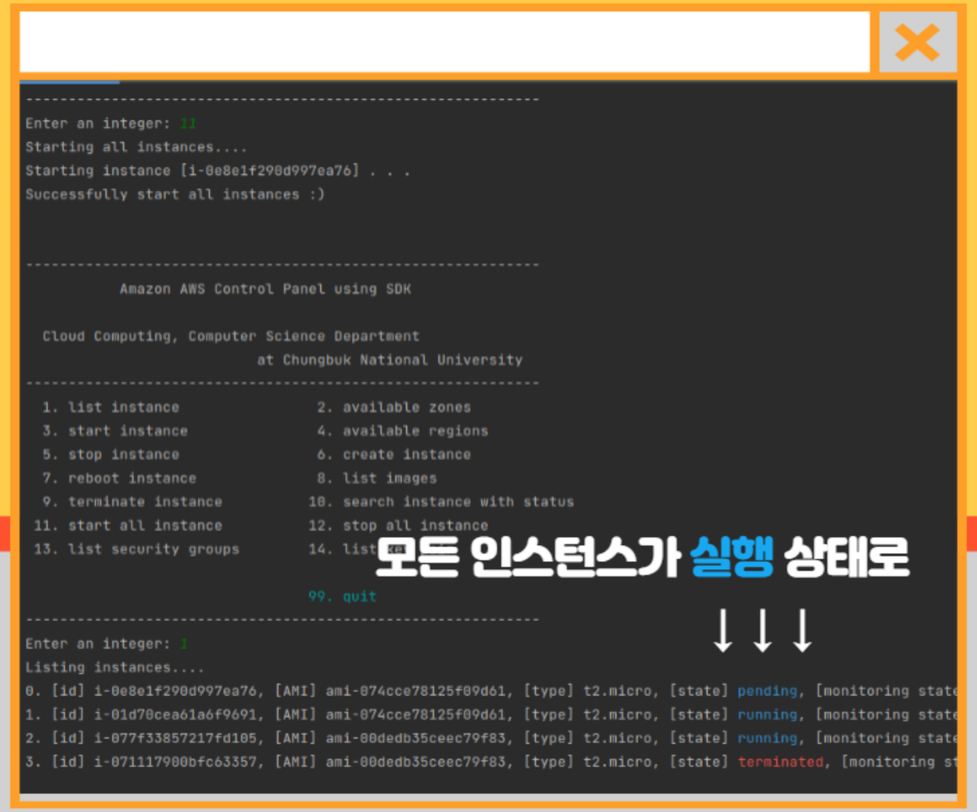
1을 선택하면 running 상태의 인스턴스만
2를 선택하면 stopped 상태의 인스턴스만
출력한다.

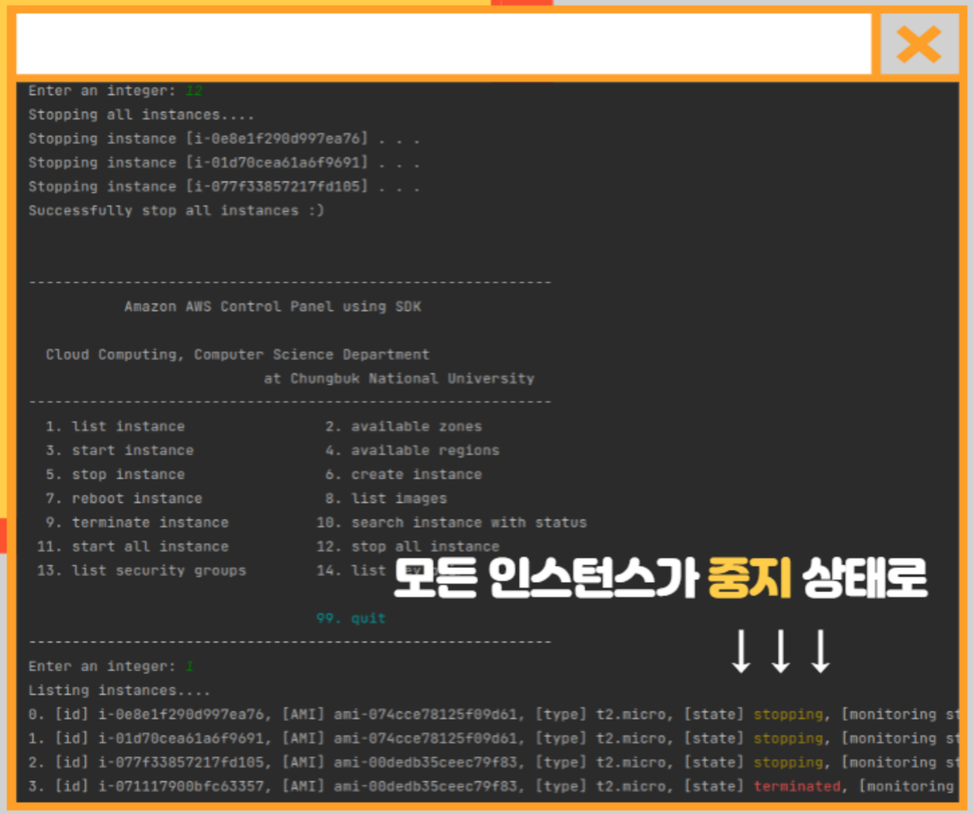
다른 값이나 숫자가 아닌 값을 입력하면
예외처리에 의해 다시 입력하도록 안내한다.

추가 메뉴 구현

11. Start All instance : 모든 인스턴스 시작

12. Stop All instance : 모든 인스턴스 중지





```
  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: 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.ama
[region] eu-central-1, [endpoint] ec2.eu-central-1.amazona
[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
```

추가 메뉴 기능

13. List Security Groups : 보안 그룹 목록을 출력

14. List Key Pairs : 키페어 목록을 출력

```
                                 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
```

클라우드 컴퓨팅 Term Project

```
            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

Name	인스턴스 ID	인스턴스 상태	인
slave	i-0e8e1f290d997ea76	실행 중	t2
master	i-01d70cea61a6f9691	실행 중	t2
slave2	i-077f33857217fd105	실행 중	t2