Create Instance using Ansible

first of all you need to create variables file where you need to mention all the instance related details.
create a folder **group_vars** inside that create a file named **all.yml**
aws_region: us-east-1

```
key_name: testsonam (key is also created and downloaded to my system)
ami_id: ami-020cba7c55df1f615
instance_type: t2.micro
tag_name: dev-instance
security_group_name: sonamvm (this group is already created in aws with 22,80
incbound rules)
```

Now create a Playbook for creating instance. **create_ec2.yml**

```
---
- name: Launch EC2 Instance
hosts: localhost
connection: local
gather_facts: false

vars_files:
- group_vars/all.yml

tasks:
- name: Launch EC2 instance
amazon.aws.ec2_instance:
name: "{{ tag_name }}"
key_name: "{{ key_name }}"
instance_type: "{{ instance_type }}"
image_id: "{{ ami_id }}"
region: "{{ aws_region }}"
security_group: "{{ security_group_name }}"
count: 1
tags:
Environment: dev
register: ec2_result
```

```
- name: Output instance details
  debug:
  var: ec2_result
```

Now Run the Playbook using below command to create instance.

```
ansible-playbook create_ec2.yml
```

The above playbook run locally, it will use AWS configuration to connect with aws console and create Instance.
Once the instance is created we want to create Dynamic inventory.
This inventory dynamically connect with your aws console and take the instances where you want to run playbook based on the filters mentioned.
create folder **inventory** under that create file **aws_ec2.yml**
plugin: amazon.aws.aws_ec2
regions:
 - us-east-1

```
filters:
instance-state-name: running
tag:Environment: dev

keyed_groups:
- key: tags.Name
prefix: env

hostnames:
- public-ip-address

compose:
ansible_host: public_ip_address
```

To check the Inventory is correct or not you can run below commands

```
ansible-inventory -i inventory/aws_ec2.yml --list //It will give list of Host
vars

ansible-inventory -i inventory/aws_ec2.yml --graph //you can see the list of
only groups and host vars.
```

Now I want to do the connectivity with instance using this created inventory.

Let's check with ping command.

```
ansible -i inventory/aws_ec2.yml all -u ubuntu --private-key
~/.ssh/testsonam.pem -m ping
```

Above command will try to connect with your instance based on dynamic inventory
to add ssh key under the ssh folder follow below commands

```
mkdir ~/ .ssh
cp testsonam.pem ~/ .ssh/testsonam.pem (is case permission problem use sudo)
chmod 400 ~/ .ssh/testsonam.pem (now this is not publically open)
```

If you don't want to ping all host but only selected group you can give keyed group value
like in our inventory we mentioned

```
keyed_groups:
- key: tags.Name
prefix: env
```

This means filtered instance will kept under the group named prefix_key
in our case env_dev_instance.
if we want to ping only this group then use below command

```
ansible -i inventory/aws_ec2.yml env_dev_instance -u ubuntu --private-key
~/.ssh/testsonam.pem -m ping
```