Boto3 Assignments

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Exercise - 1 (We already did it in class)

- Launch 1 EC2 instance via the AWS Console on a specific region. (us-west-2)
- Create your own AWS credentials (AWS Access key id + AWS Secret access key)
- Create your first Boto3 project:
  - Create an EC2 client
  - Print all running EC2 instances
- Use the documentation:
  - Python SDK - https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/ec2.html#EC2.Client.describe_instances
  - API Reference - https://docs.aws.amazon.com/goto/WebAPI/ec2-2016-11-15/DescribeInstances

Exercise - 2

- Launch 2 EC2 instances via the your Boto3 client:
  - Region: us-west-2
  - Tag: Key: Creator, Value: Your name
  - Use a free tier image id: `ImageId='ami-026b57f3c383c2eec'`
  - Use a free tier instance type: `InstanceType='t1.micro'`
  - Stop one of the instances via AWS Console
- Get and print the instance ids for all instances created by yourself (Hint: use the tag)
- **Bonus:** Stop the instances via the Boto3 client
- Use the documentation:
  https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/ec2.html#EC2.Client.run_instances

Exercise - 3

- Create several S3 buckets via AWS Console
- Print all buckets by Boto3
- Create a txt file and upload it to one of your S3 bucket- by AWS Console
- Read the text file by Boto3
- Change the text
- Override the file in S3
- Read the text file by Boto3 and print the text
- **Bonus:** Upload the file to S3 bucket by Boto3 client
- Use the documentation: https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/s3.html

Exercise - 4

- **Home Task** - EC2
  - Get all EC2 instances
  - Filter out instances with specific tags (don’t terminate instances with tag key/tag value named protected)
  - Terminate instances
  - **Bonus:** Get dynamic list of tags from S3 txt file (Insert it manually / by boto3)
  - **Bonus 2:**
    - Create AMI from one of the instances
    - Wait for AMI completion
    - Then, Terminate the instance

Exercise - 5

- **Home Task** - S3 & Files
  - Create a new S3 bucket
  - Create a new text file by python, add your name
  - Archive the file to .zip by python
  - Upload your zip file to a S3 bucket by Boto3 client
  - Read the file from your S3 bucket by Boto3 client and unzip it
  - Edit the text in the file, archive it and overwrite it on your S3 bucket
  - Read the updated file from S3 and print the text content

Terminate all EC2 instances - now!

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Good Luck!

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