

# Cloud Computing Final Assignment

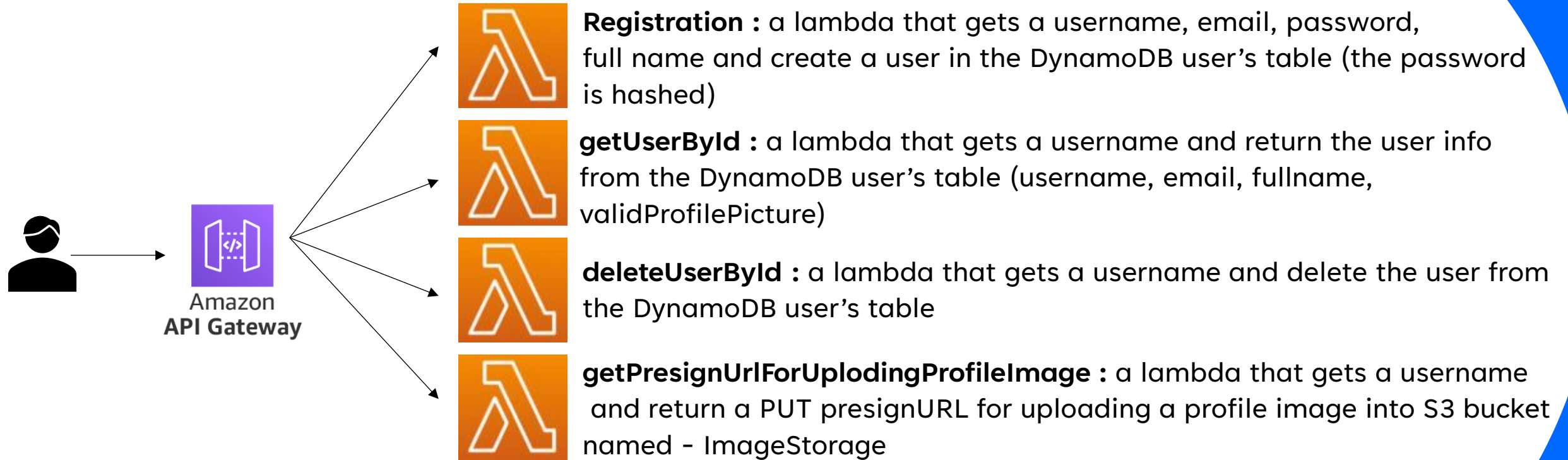
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# **First Part –**

## **Build a basic user system**

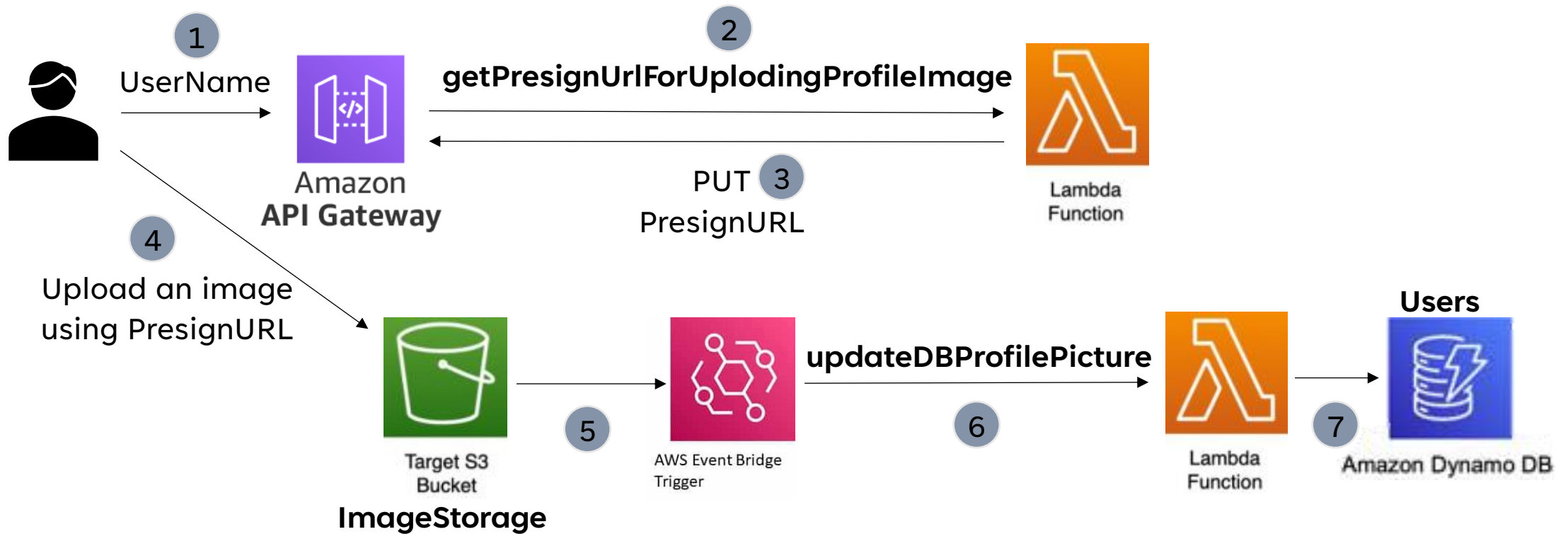


# lambdas – part A



- **updateDBProfilePicture** : a lambda that gets triggered when an image is uploaded to the ImageStorage S3 bucket and update the DynamoDB user's table with that he has a valid profile picture and the URL to the image in the bucket

# Diagram - Upload User Profile Picture



# DynamoDB – users table



- Users table: UserName, Email, Password, Fullname, validProfilePicture, profilePictureUrl

<input type="checkbox"/>	UserName (String) ▼	Email ▼	FullName ▼	Password ▼	profilePictureUrl ▼	validProfilePicture
<input type="checkbox"/>	<a href="#">raz</a>	raz@gmail....	raz saad	96cae35ce8...		
<input type="checkbox"/>	<a href="#">ofek</a>	ofek@gmai...	ofek kats	96cae35ce8...	https://socialnetwork...	true

# S3 Bucket – imageStorage



Target S3  
Bucket

Each user has a folder containing his profile picture (if he has one)

 <a href="#">ofek/</a>	Folder
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 <a href="#">raz/</a>	Folder
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For example, inside the folder 'ofek':

 <a href="#">ofek_ProfilePicture.jpg</a>	jpg
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 <a href="#">placeholder.txt</a>	txt
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# **Second Part –**

**Build your feature for our  
Social Network**



# Our feature



In this part, an innovative feature for our social network is implemented that allows users to upload posts by submitting images. Amazon **Textract** is utilized to extract text from the uploaded images, allowing users to edit the extracted text before finalizing and uploading the post. This feature includes multiple Lambda functions, SQS queues, and a DynamoDB table to manage the posts.





# DynamoDB – Posts table



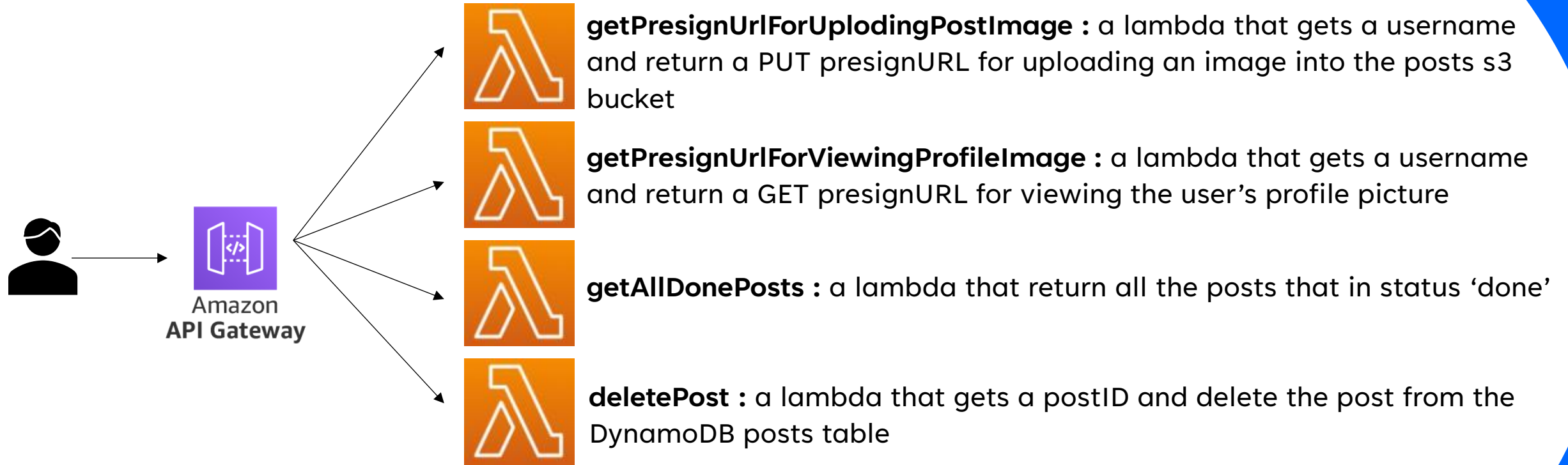
- Posts table: PostID, Content, PostDate, Staging, UserName

PostID (String) ▾	Content ▾	PostDate ▾	Staging ▾	UserName
<a href="#">1723106668625</a>	Noa kirel forever <3 i love her so much, im going to...	2024-08-08	done	ofek
<a href="#">1723118516532</a>	No text detected in the image.	2024-08-08	error	raz
<a href="#">1723118528824</a>	AWESOME	2024-08-08	staging	raz
<a href="#">1723102750168</a>	meni give us 100	2024-08-08	done	raz

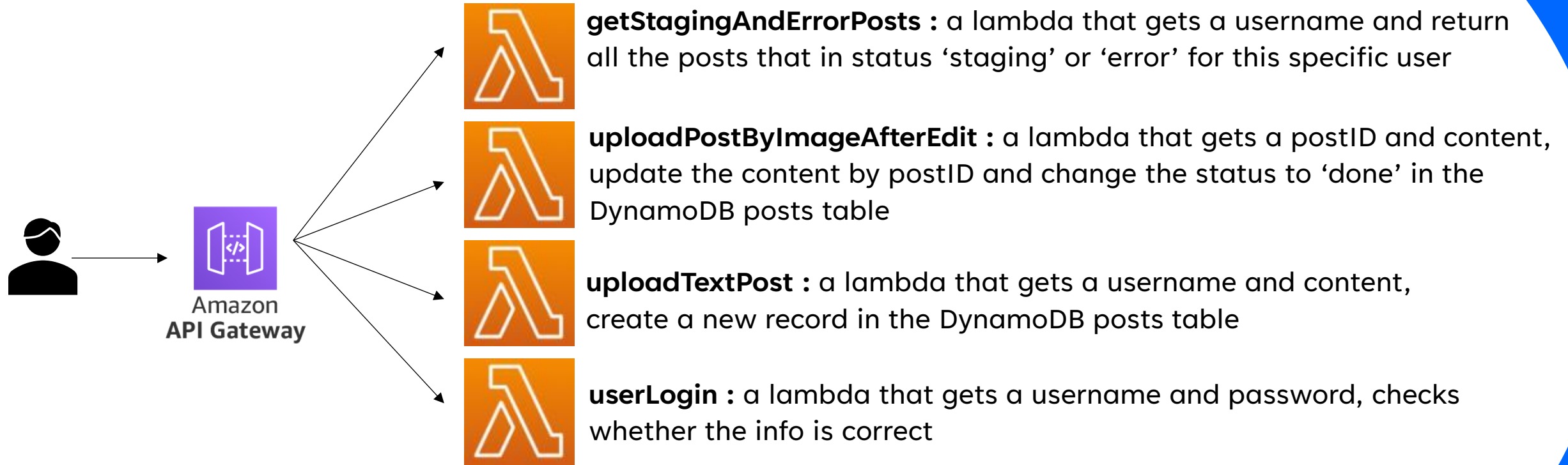
- GlobalSecondaryIndex:
  - StagingIndex
  - UsernameStagingIndex



# lambdas – part B



# lambdas – part B



# lambdas – part B



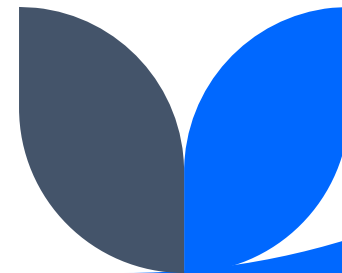
**textextractImage** : a lambda that gets an event from SQS, using Textract to extract the text from the image and send the result to another SQS



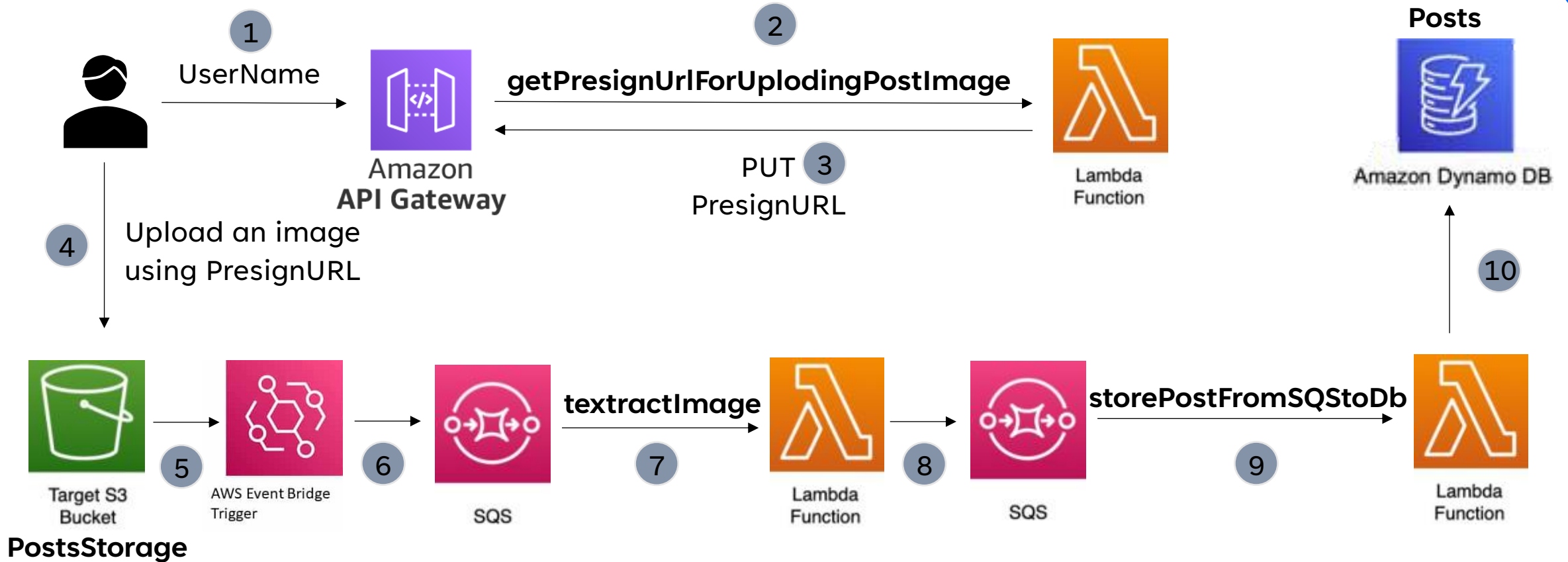
**storePostFromSQStoDb** : a lambda that gets an event from SQS with the extracted text and create a new record in the posts table in the DynamoDB



**emptyBucket** : a lambda that empty S3 buckets – \*only for destroy



# Diagram - Upload A Post By An Image



# S3 Bucket – PostsStorage



Target S3  
Bucket

Each user has a folder containing his posts pictures (if he uploaded any)

 <a href="#">ofek/</a>	Folder
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 <a href="#">raz/</a>	Folder
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For example, inside the folder 'raz':

 <a href="#">raz_Post1723102711015.jpg</a>	jpg
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 <a href="#">raz_Post1723118512456.jpg</a>	jpg
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 <a href="#">raz_Post1723118525095.jpg</a>	jpg
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# Demo Part – live



**Thank you  
for listening**