

## Experiment 5 Output

**Aim:** In this experiment AWS Lambda deployment, execution, and testing are done using **AWS CLI** and **LocalStack**. The runtime image is pulled from **Amazon ECR** via **Docker**. This simulates a serverless environment for function invocation and validation.

### Creating Lambda Function

```
C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment5>aws lambda create-function --runtime python3.8 --role arn:aws:iam::000000000000:role/execution_role --function-name myLambdaFunction --zip-file fileb://lambda_function.zip --handler lambda_function.lambda_handler --memory-size 128 --timeout 3 --version $LATEST
```

CodeSha256	G16xwAmelqgPBfzQVMlj7SR/dZS51TV2WS8mGqvrvRw=
CodeSize	312
Description	
FunctionArn	arn:aws:lambda:us-east-1:000000000000:function:myLambdaFunction
FunctionName	myLambdaFunction
Handler	lambda_function.lambda_handler
LastModified	2025-02-18T13:15:50.795443+0000
MemorySize	128
PackageType	Zip
RevisionId	2374e552-2a8c-45ec-b793-b30ede78fa
Role	arn:aws:iam::000000000000:role/execution_role
Runtime	python3.8
State	Pending
StateReason	The function is being created.
StateReasonCode	Creating
Timeout	3
Version	\$LATEST

Architecture: x86\_64

Fig 1: VPC Setup

### Pulling Amazon ECR for execution

```
C:\Users\rawat\Documents\8 SEMESTER\Cloud Computing\Lab\Experiment5>docker pull public.ecr.aws/lambda/python:3.8
```

3.8: Pulling from lambda/python  
bc2b3a540f9b: Pull complete  
7e7a8ab075f3: Pull complete  
eb63e7acde8e: Pull complete  
35e8cd243a50: Pull complete  
d4160264f321: Pull complete  
32e94a394cab: Pull complete  
Digest: sha256:93e78742873d3ad0c28582366b217ce5169889f4c  
Status: Downloaded newer image for public.ecr.aws/lambda/python:3.8

REPOSITORY	TAG	IMAGE ID
flask-app	latest	269bf42596ed
<none>	<none>	44b808030263
<none>	<none>	063caad47b0a
localstack/localstack	latest	b686f3948f42
hello-world	latest	74cc54e27dc4
public.ecr.aws/lambda/python	3.8	348b357f1c82

Fig 2: Docker Pulling and Output Image

### Listing working Functions

```
aws lambda list-functions
```

Functions	
CodeSha256	G16xwAmelqgPBfzQVMlj7SR/dZS51TV2WS8mGqvrvRw=
CodeSize	312
Description	
FunctionArn	arn:aws:lambda:us-east-1:000000000000:function:myLambdaFunction
FunctionName	myLambdaFunction
Handler	lambda_function.lambda_handler
LastModified	2025-02-18T14:59:44.179009+0000
MemorySize	128
PackageType	Zip
RevisionId	63fa3566-804e-4b8c-94c6-a8b3e65e6d02
Role	arn:aws:iam::000000000000:role/execution_role
Runtime	python3.8
Timeout	3
Version	\$LATEST

Architectures	
Architecture	x86_64

EphemeralStorage	
Size	512

LoggingConfig	
LogFormat	Text
LogGroup	/aws/lambda/myLambdaFunction

Fig 3: Lambda working Function

### Lambda Function invoking with Payload

```
aws lambda invoke --function-name myLambdaFunction --payload '{"message": "Hello, Madhurima!"}'
```

ExecutedVersion	StatusCode
\$LATEST	200

```
aws lambda get-log --function-name myLambdaFunction --log-group-name /aws/lambda/myLambdaFunction --log-stream-name 2025-02-18T14:59:44.179009+0000
```

```
{
  "statusCode": 200,
  "body": "{\"message\": \"Hello, Madhurima!\"}"
}
```

Fig 4: Lambda Function Output