

## A Media Streaming Application Using IBM Cloud Video Streaming.

### AIM :

To develop a media streaming application using IBM Cloud Video Streaming that allows users to upload, store, and stream video content efficiently.

### PROGRAM :

```
from flask import Flask, render_template
import ibm_boto3
from ibm_botocore.client import Config

app = Flask(__name)

# IBM Cloud Object Storage configurations
cos_endpoint = "YOUR_COS_ENDPOINT"
cos_api_key_id = "YOUR_API_KEY"
cos_resource_crn = "YOUR_RESOURCE_CRN"
bucket_name = "YOUR_BUCKET_NAME"
video_key = "your_video.mp4"

# Initialize COS client
cos = ibm_boto3.client("s3", ibm_api_key_id=cos_api_key_id,
```

```
ibm_service_instance_id=cos_resource_crn,  
config=Config(signature_version="oauth"),  
endpoint_url=cos_endpoint)
```

```
@app.route('/stream')
```

```
def stream_video():
```

```
    video_url = cos.generate_presigned_url('get_object',  
    Params={'Bucket': bucket_name, 'Key': video_key},  
    ExpiresIn=3600)
```

```
    return render_template('video.html', video_url=video_url)
```

```
if __name__ == '__main__':
```

```
    app.run(debug=True)
```

```
    **Sample HTML program**
```

```
    <!DOCTYPE html>
```

```
    <html>
```

```
    <head>
```

```
        <title>Video Streaming</title>
```

```
    </head>
```

```
    <body>
```

```
        <h1>Streaming Video</h1>
```

```
        <video width="640" height="360" controls>
```

```
            <source src="{{ video_url }}" type="video/mp4">
```

```
            Your browser does not support the video tag.
```

```
        </video>
```

```
    </body>
```

```
    </html>
```

## Output :

When you run this program and access <http://127.0.0.1:5000/stream> in your web browser, you will see a basic web page with an embedded video player.

The video is streamed from IBM Cloud Object Storage using a presigned URL.

Users can view the video through the web page.

## Conclusion:

In conclusion, this project demonstrates the successful implementation of a media streaming application using IBM Cloud Video Streaming. The platform allows users to upload, store, and stream videos while ensuring high-quality video playback, user authentication, and robust monitoring. It provides a scalable and highly available solution for media content delivery, meeting the demands of modern media streaming applications.