

Tech lead | take-home assignment 1

Task

Executing a User Story: Create a web application that makes a zip archive from multiple publicly accessible files.

Time for task completion

7 days

User Story

Collecting all these media files in one place is a tedious task. Is there a way I could use a web server that could handle this job for me, running completely in the background so that I don't have to keep my computer running?

All the files that I have are publicly available assets, such as links to S3 files.

I would like to know (using the API) when the process of archiving the files is finished and get the link to the zip archive containing all files requested.

Definition of Done

- There is an API endpoint (can be set up locally):

`http://server.example.com/api/archive/create`

This endpoint takes a list of URLs with publicly available files and as a response returns a hash which can be used to check the status of the job.

Example request body (POST):

```
/api/archive/create
{
```

```
"urls": [  
  "https://s3.amazonaws.com/publically-available-file.png",  
  "https://s3.amazonaws.com/movie1.mov",  
  "https://s3.amazonaws.com/movie2.avi"  
]  
}
```

Response:

```
{  
  "archive_hash": "1232-13afasd-fdsf4323214-842"  
}
```

- There is another API endpoint to see the job status:

<http://server.example.com/api/archive/status>

If the archive is generated that status returns unique URL on the API server to download all files packed together.

Example request (GET)

<http://server.example.com/api/archive/status/1232-13afasd-fdsf4323214-842>

Response (when in progress)

```
{  
  "status": "in-progress"  
}
```

Response (when finished)

```
{  
  "status": "completed",  
  "url": "http://localhost/archive/get/1232-13afasd-fdsf4323214-842.zip"  
}
```

- It is possible to download from the archive from the server (for test purposes everything can run locally). In the above example <http://localhost/archive/get/1232-13afasd-fdsf4323214-842.zip>

[13afasd-fdsf4323214-842.zip](#) link works.

- API can be spun-up using a single Docker command

Please note that there is no requirement to use the database of any sort in the above, basic solution of this task.

All processing can happen in local memory.

Extra (Optional - bonus points)

- Error handling is top-notch: invalid HTTP responses, handling missing files etc.
- Predefined webhook (another server) being called when archive generation job is finished.
- The archive generation succeeds even in case of network errors and is capable of resuming the downloads
- The archive generation succeeds even if the API server is being restarted during the job run.

What are the other unexpected problems that you could think of and how would you improve your solution if you had more time.