UNIVERSIDAD PANAMERICANA

MULTIMEDIA & COMPUTER GRAPHICS

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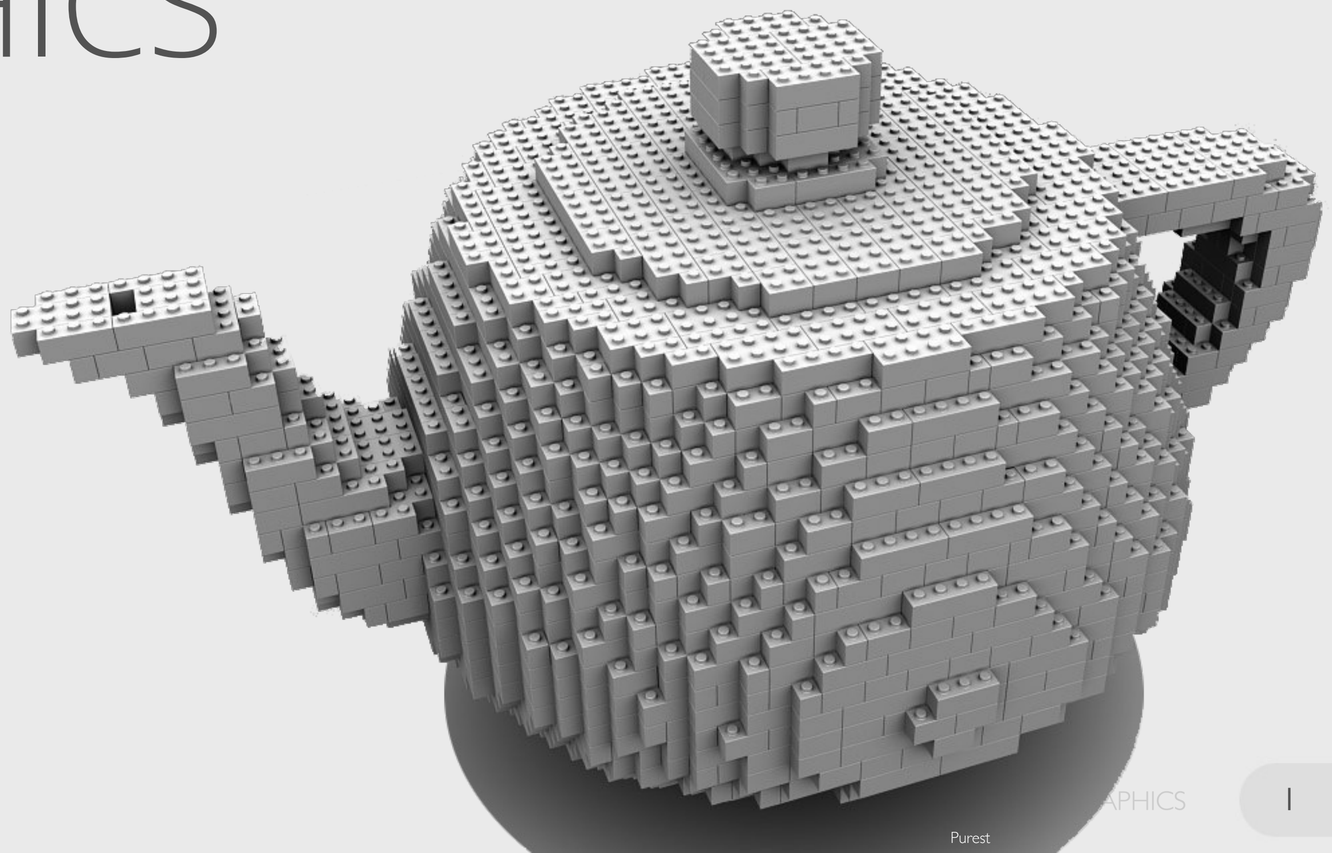
PIPELINE, EXIF & WEBSERVICES

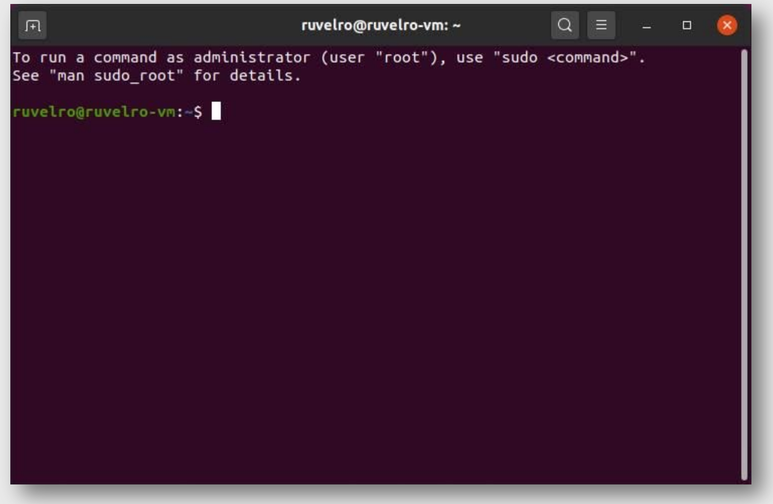


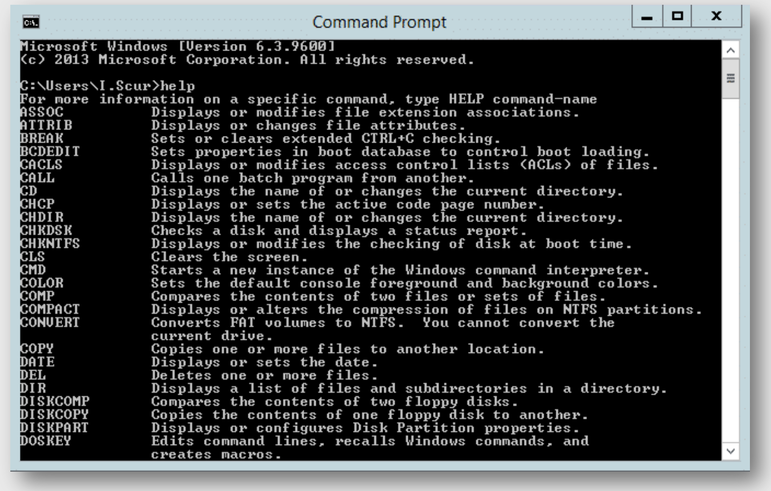
Purest

JAVA RUNNING EXECUTABLES

Runtime vs ProcessBuilder

Windows and Linux interpret differently





OPENAI API

https://openai.com/pricing

https://platform.openai.com/account/usage

https://platform.openai.com/docs/api-reference

CURL

cURL (client URL)

Commands to communicate with a server

You need to run *sudo apt install curl*

curl -X POST https://postman-echo.com/post --data foo1=bar1&foo2=bar2

2ND ASSIGNMENT

Normal mode (24,761 pts)

You will create a tourism commercial video using the tools we have learned. The project will require you to write Java code that processes media files and outputs a final video.

Input:

1. A set of photos and videos (in mixed orientations).
2. A text prompt describing the desired mood for the video (e.g., “relaxing beach vibe” or “adventurous mountain trip”).

Deadline: Tuesday April 1, 3.59pm

2ND ASSIGNMENT

Output:

A fully generated commercial video that follows this structure:

1. Opening Scene:
   - Generate an AI-created postcard of the destination (based on the input mood).
   - Display the postcard as the first frame of the video.
2. Main Content (Chronological Order):
   - Sort photos and videos by date.
   - Ensure each photo/video is displayed with the correct orientation.
   - A voice-over AI narration describes the scene based on what is seen in the images.
3. Closing Scene:
   - Create a collage where all the images and videos are played simultaneously.
   - At the center of the screen, show a final AI-generated postcard as a closing image.

2ND ASSIGNMENT

Technical Requirements

- Java Code: Your code must process media files and generate the final video.
- FFMPEG: Use FFMPEG to merge and process video clips.
- EXIF Data Handling: Read metadata to ensure correct orientation of photos.
- AI Integration:
- Use a text-to-image AI API to generate postcards.
- Use a text-to-speech AI API to generate the voice-over narration.
- CURL Commands: Use CURL to send API requests for AI-generated content.

2ND ASSIGNMENT

Deliverables

1. A report that includes an interpretation of what you need to do for the project, along with proposals on how you plan to solve it.
2. Java Code that processes inputs and generates the video.
3. A working output video demonstrating the commercial.
4. A report in which you propose how to scale your current solution into a commercial IT tool that addresses a real market need.

2ND ASSIGNMENT

Deliverables & Scoring (Total: 24,761 points)

1. Project Interpretation & Solution Proposal – 3,000 pts
   - Explanation of project understanding (1,500 pts)
   - Proposed approach to solving it (1,500 pts)

   Deadline: Thursday March 13, 3.59pm

2. Java Code Implementation – 8,800 pts
   - Correctly processes images/videos (3,500 pts)
   - Ensures chronological order & orientation (2,000 pts)
   - Integrates AI-generated elements (image, narration) (2,300 pts)

2ND ASSIGNMENT

3. Final Commercial Video Output – 5,200 pts
   - Includes AI-generated opening postcard (1,000 pts)
   - AI narration correctly describes content (1,500 pts)
   - Chronological and properly formatted display (1,200 pts)
   - Correct closing scene with collage & final postcard (1,500 pts)
4. Scaling Proposal for Commercial IT Tool – 2,000 pts
   - Explanation of how to turn it into a real-world IT tool (1,000 pts)
   - Market need analysis (1,000 pts)
5. Coding Principles – 6,400 pts
6. Self-Evaluation – 1,261 pts

CODING PRINCIPLES

Does it have only necessary code? (400 pts)

Does it properly uses OOP? (600 pts)

Is the code reusable? (1,000 pts)

Is the code flexible? (1,000 pts)

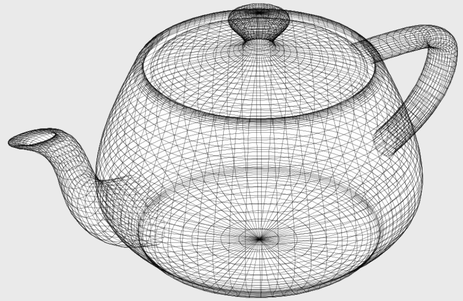
Does it have bugs? (800 pts)

Is the code scalable? (800 pts)

Does it have comments? (800 pts)

Is the code a huge mess or neat? (1,000 pts)

REFLECTION



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