Arab Academy for Science and Technology and Maritime Transport

College of Computing and Information Technology

Course	Data Compression (CS411)
Lecturer	Dr. Saleh Mesbah
TA	Mahmoud ElMorshedy

12th Project

Choose one of the two projects below:

Project 1:

1. Compress ASCII text files using both:
    a. Huffman Coding
    b. LZW

    The ASCII files are available in you Classroom.

    Your code should take a file as an input and parse it, then output an encoded binary file.
2. Provide a report summarizing the results of your project. Your report should include:
    a. The compression algorithm chosen
    b. The programming language used
    c. Your code
    d. Sample output (Sample Text, Sample Encoded String)
    e. A comparison between the compression ratios the files as follows

	File 1	File 2	File 3
Huffman	Compression Ratio	Compression Ratio	Compression Ratio
LZW	Compression Ratio	Compression Ratio	Compression Ratio

Project 2:

1- Compress a grayscale image using LZW algorithm
   - Your base dictionary is the gray levels (0 – 255)
   - Parse the image pixels from left to right, top to bottom and apply LZW to encode patterns of pixel intensities.
   - Apply your code on the given images in your drive folder.

2- Provide a report summarizing the results of your project. Your report should include:
   a. The compression algorithm chosen
   b. The programming language used
   c. Your code
   d. Sample output (Sample Text, Sample Encoded String)
   e. A comparison between the compression ratios the files as follows

	Image 1	Image 2
LZW	Compression Ratio	Compression Ratio

- Group: 1-2 max (For any of the two projects, but you may work in a group of 3 and implement both projects).
- Submit to Classroom.
- Include your names and registration numbers in the submission files.