

Programming Assignment 1: Image Rotation

Write a C program to perform the following steps:

- Read a color image bitmap file from disk.
- Input an integer rotation between 0 and 3 to rotate the input image in the following way, 0: rotate the image 0 degree, 1: rotate the image clockwise 90 degrees, 2: rotate the image clockwise 180 degrees, and 3: rotate the image clockwise 270 degrees.
- Write the image bitmap file after rotation to disk.
- Output the resulting file header and the image information head on the screen.

In this assignment, you must submit two files: the source code of the solution **assgn1_DXXXXXXX.c** (80%) and the assignment report **assgn1_DXXXXXXX.pdf** (20%), where DXXXXXXX is your student ID. In the assignment report, you should explain how image rotation is performed. The assignment is due by **23:59 pm, Sunday, February 26, 2023**.

Program execution image examples:

Input image abraham_lake.bmp:



Rotate 0 degree abraham_lake_rotation0.bmp:



Rotate 90 degrees abraham_lake_rotation1.bmp:



Rotate 180 degrees abraham_lake_rotation2.bmp:



Rotate 270 degrees abraham_lake_rotation3.bmp:

