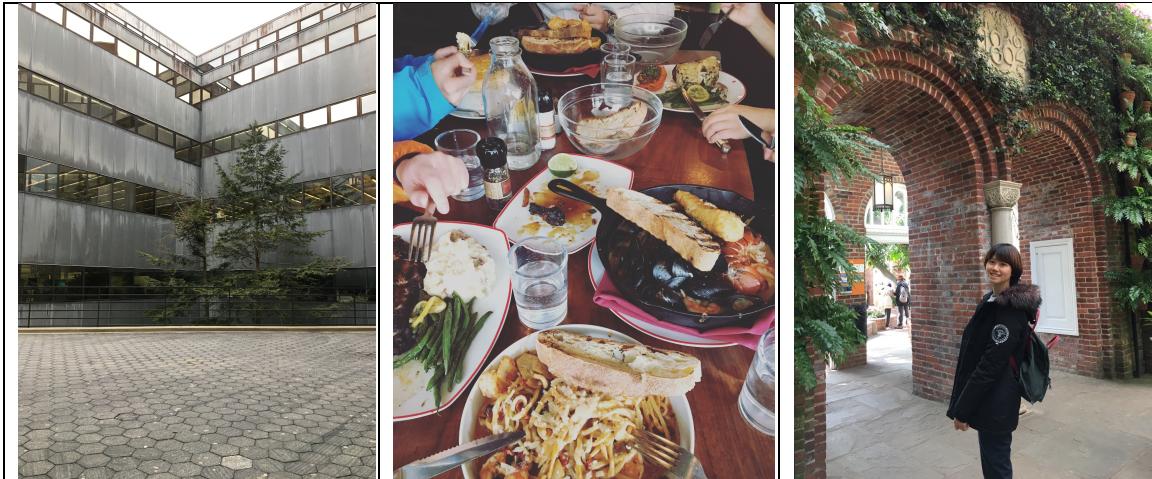


CSE534 Multimedia Systems Assignment3

Student Name: Chen, Shih-Chia

Student ID: 50207079

- (a) I) Three original pictures, outdoor, indoor, and portrait are ori\_pic1.jpg, ori\_pic2.jpg, and ori\_pic3.jpg.



- II) grey scale pictures: grey1.jpg, grey2.jpg, and grey3.jpg



III) subsampled images: subsample1.jpg, subsample2.jpg, subsample3.jpg



(b) Quantization Tables:

```

Q1 = [ 16 11 10 16 24 40 51 61;
       12 12 14 19 26 58 60 55;
       14 13 16 24 40 57 69 56;
       14 17 22 29 51 87 80 62;
       18 22 37 56 68 109 103 77;
       24 35 55 64 81 104 113 92;
       49 64 78 87 103 121 120 101;
       72 92 95 98 112 100 103 99];
Q2 = [ 1 1 1 1 1 2 3 3;
       1 1 1 1 1 3 3 3;
       1 1 1 1 2 3 3 3;
       1 1 1 1 3 4 4 3;
       1 1 2 3 3 5 5 4;
       1 2 3 3 4 5 6 5;
       2 3 4 4 5 6 6 5;
       4 5 5 5 6 5 5 5];
Q3 = [ 17 18 24 47 99 99 99 99;
       18 21 26 66 99 99 99 99;
       24 26 56 99 99 99 99 99;
       47 66 99 99 99 99 99 99;
       99 99 99 99 99 99 99 99;
       99 99 99 99 99 99 99 99;
       99 99 99 99 99 99 99 99];

```

Q1 and Q3 are selected from the lecture note, and Q2 are selected randomly, in order to compare the difference between compressed by large value (Q1) and small value (Q3).

(c) I)



II) PSNR value:

33.4538	51.5550	31.3232
34.7456	51.5444	32.0297
33.8137	51.1602	31.5759

III&IV) The image ratio compressed by Q2 is smaller than compressed by Q1 and Q3, which make the reconstructed image more clear than others. The image compressed by using Q3 has the worst quality.