Yang Zhang

CM677

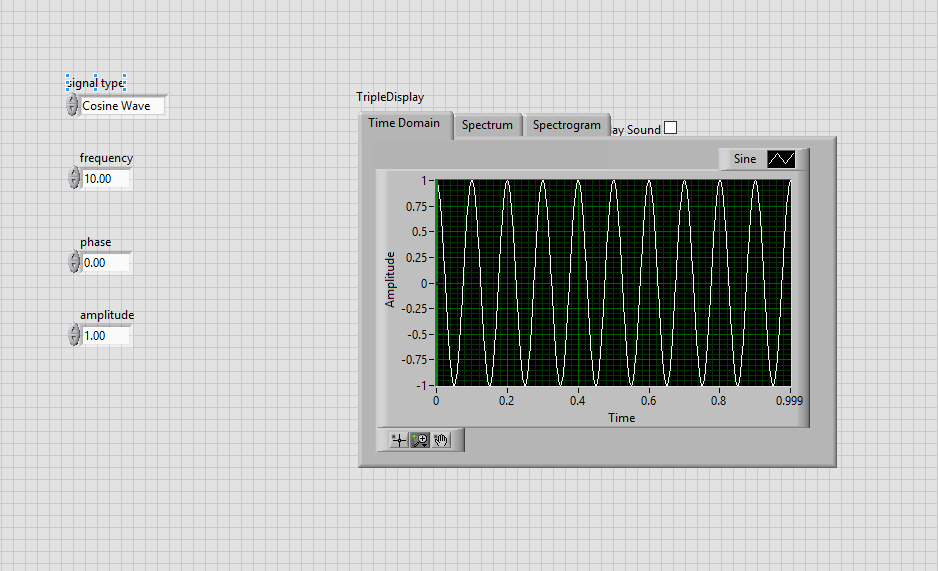
ECE380

Mini Project 1

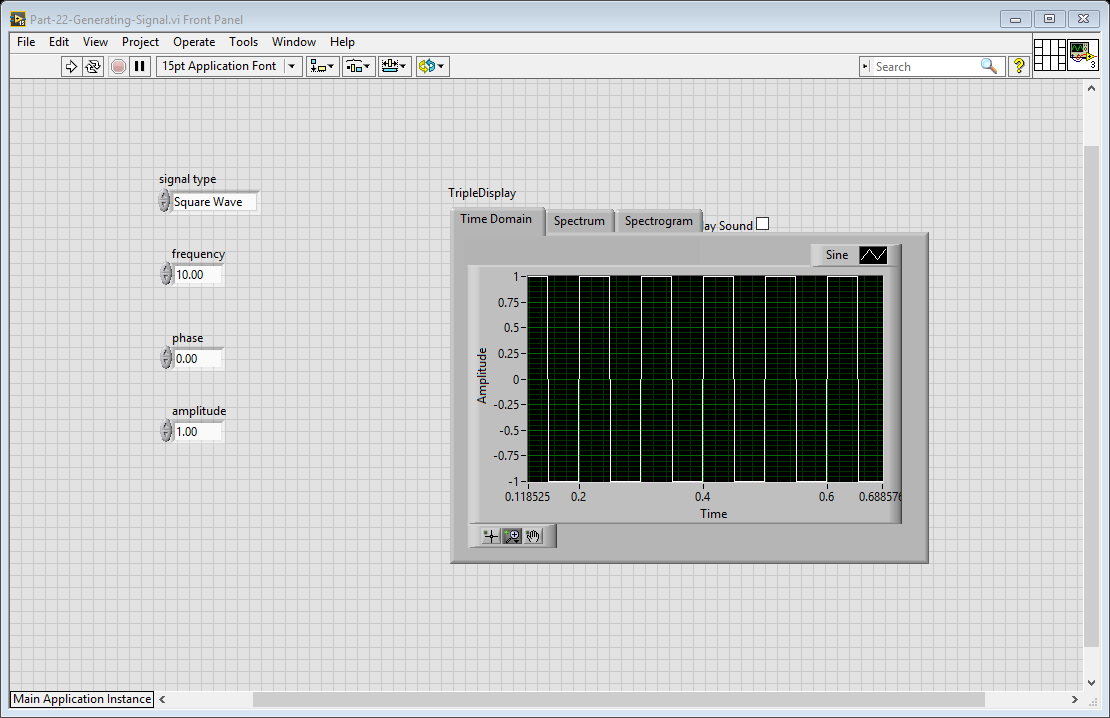
Part 2.2:

Front Panel:

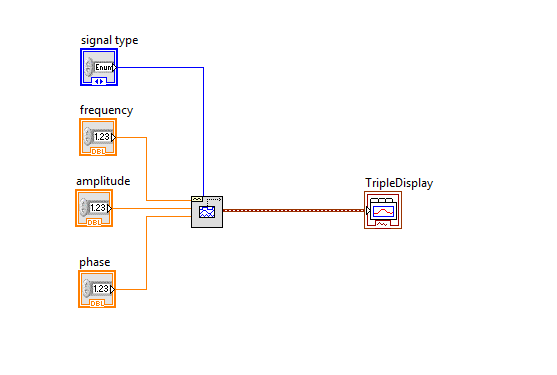
1: Cosine wave

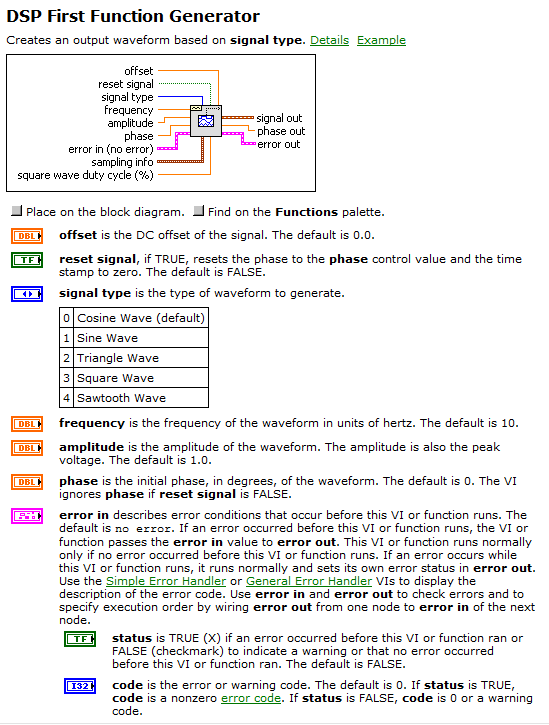


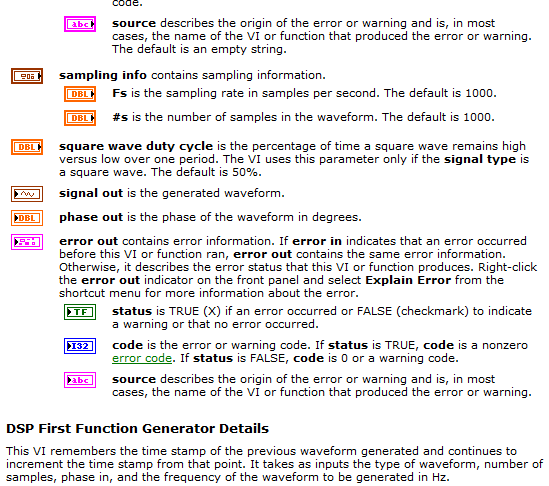
2: Square Wave:



Block Diagram:

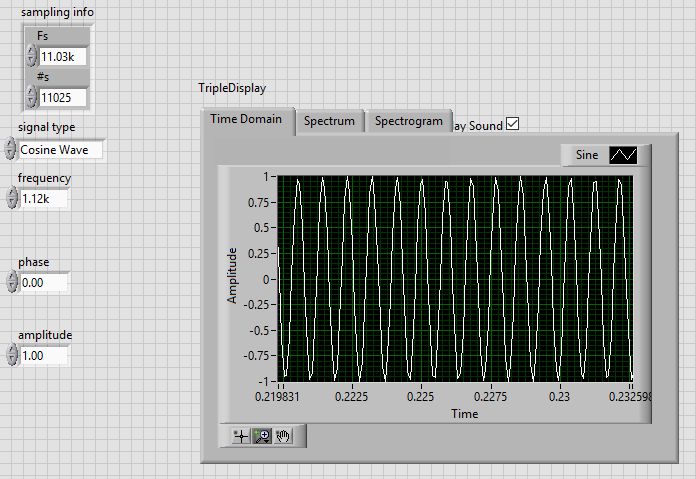




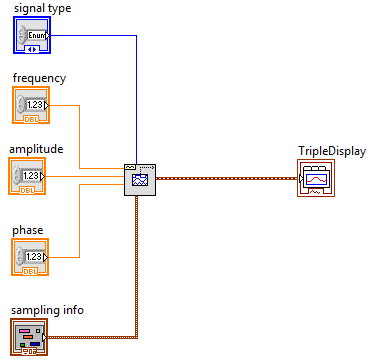


Part 2.3:

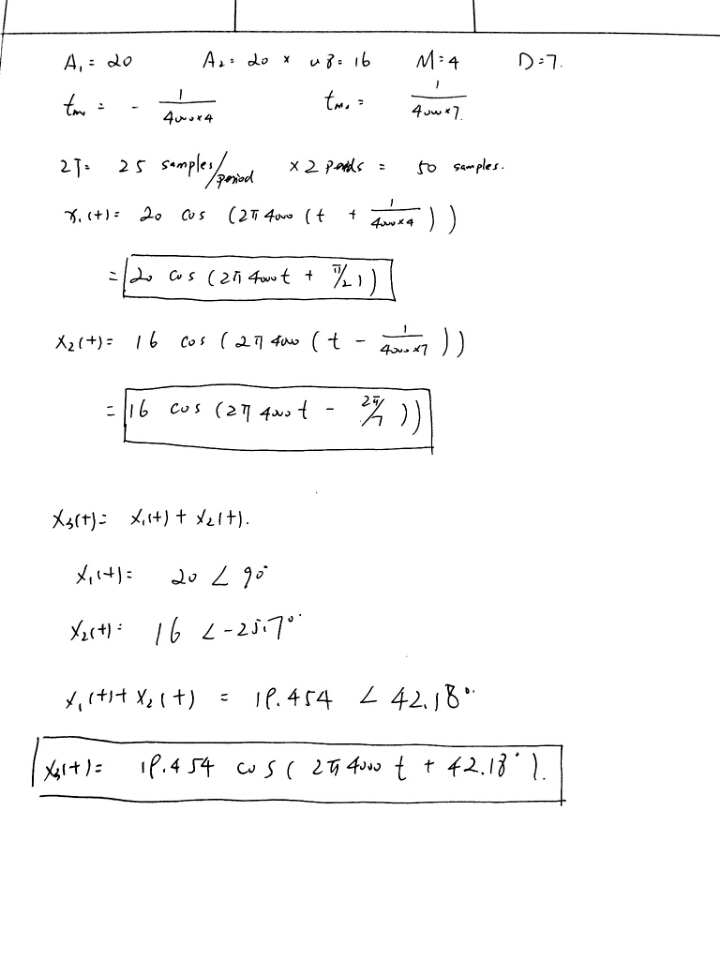
Front Panel:



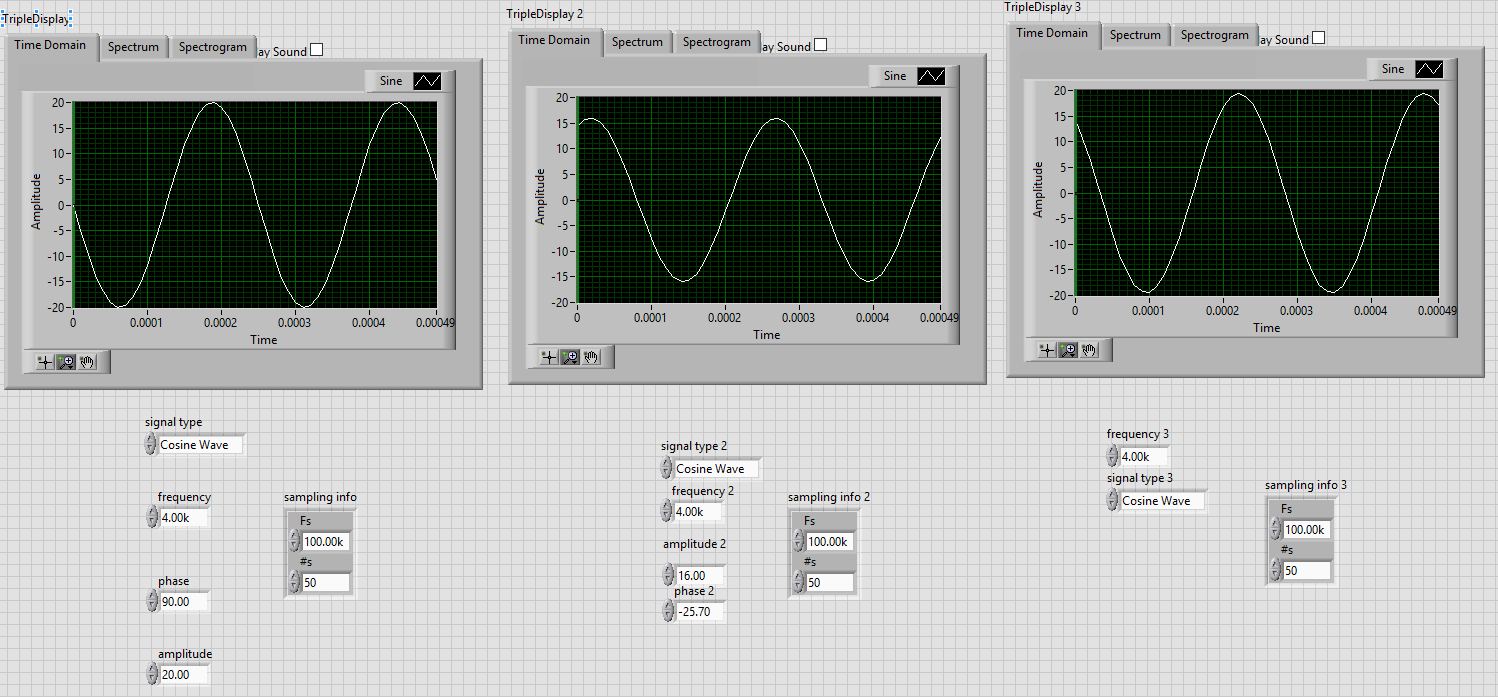
Block Diagram:



Part 3:



Front Panel:



Block Diagram:

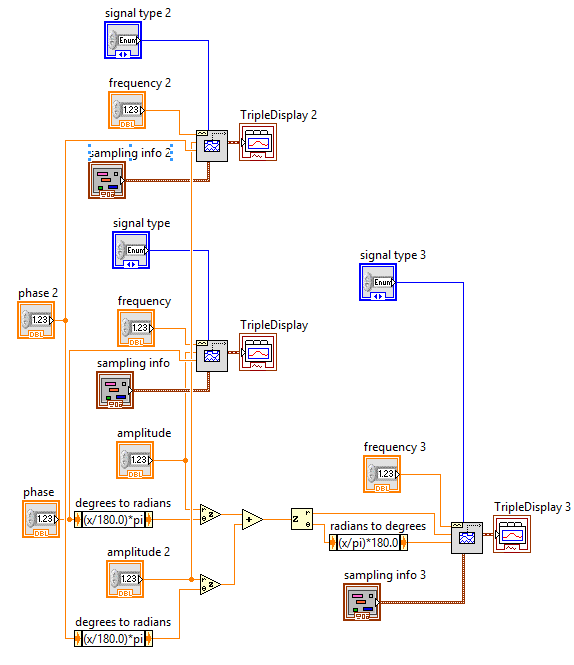
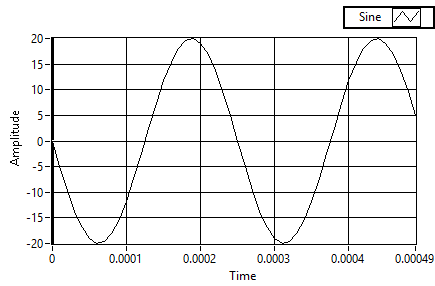
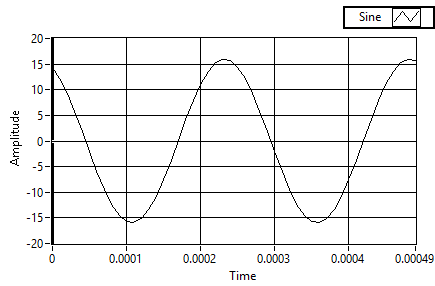


Figure 1: x1(t)



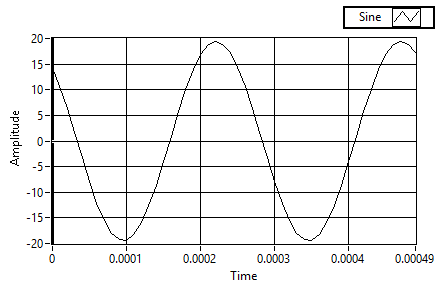
x1(t) = 20\*cos(2\*pi\*4000\*t+90degree)

Figure 2: x2(t)



X2(t) = 16\*cos(2\*pi\*4000\*t+25.7degree)

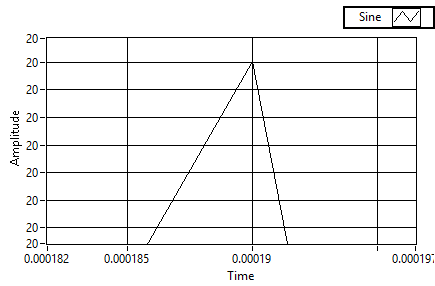
Figure 3: x3(t)



x3(t) = x1(t) + x2(t)

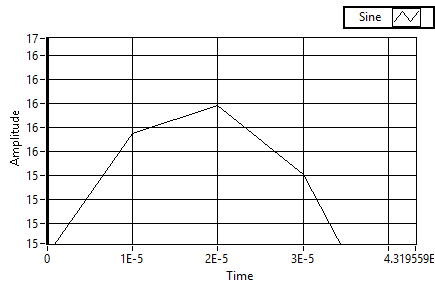
Part 3.1:

Figure 1: x1 peak



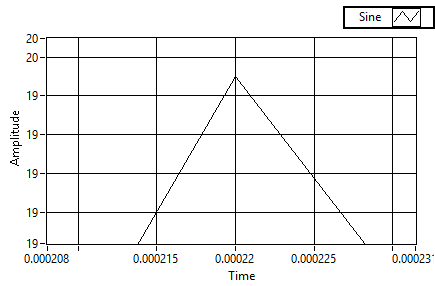
The first peak for ,

Figure 2: x2 peak



,

Figure 3: x3 peak



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Compare Table:

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Meatured | Calculated | Error |
| |x1(t)| | 20 | 20 | 0 |
| ∠x1(t) | 86.4 | 90 | 3.6 |
| |x2(t)| | 16 | 16 | 0 |
| ∠x2(t) | -28.8 | -25.7 | 3.1 |
| |x3(t)| | 19.5 | 19.454 | -0.046 |
| ∠x3(t) | 43.2 | 42.18 | -1.02 |