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| **Experiment 2(a)** |
| **Title:** Write the codes to plot the following signals also simulate the signals: |
| **Learning Objectives** |
| 1. To understand basic standard signals 2. To have hands on simulation using python language |
| **Prerequisites** |
| 1. Basic understanding of mathematics 2. Basic understanding of Python language |
| **Theory** |
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| **Simulation Code** |
| **import numpy as np**  **import matplotlib.pyplot as plt**  **Fs = samples = 10000**  **n = np.arange(samples)**  **t = n/samples**  **f1 = 200**  **f2 = 200**  **x = np.sin(2\*np.pi\*f1\*t)**  **x1 = np.sin(2\*np.pi\*f2\*t + np.pi/6)**  **plt.subplot(2,1,1)**  **plt.plot(t, x)**  **plt.title('sin(2\*np.pi\*f\*t)')**  **plt.xlabel('time t')**  **plt.ylabel('magnitude')**  **plt.subplot(2,1,2)**  **plt.plot(t, x1)**  **plt.title('sin(2\*np.pi\*f\*t+ np.pi/6)')**  **plt.xlabel('time t')**  **plt.ylabel('magnitude')**  **plt.show()** |
| **Assignment** |
| **Task1: Write description for codes**  **Task2: Vary the parameters of the signals and observe the magnitude and phase spectrum** |