**In-Lab:**

**1).** A hotel has requested a manufacturer to produce pillows and blanketsfor their room service. For materials, the manufacturer has 750 m² of cotton textile and 1,000 m² of silk. Every pillow needs 2 m² of cotton and 1 m² of silk. Every blanket needs 2 m² of cotton and 5 m² of silk. The price of the pillow is fixed at $5 and the blanket is fixed at $10.What is the number of pillows and blankets that the manufacturer must give to the hotel so that these items obtain a maximum sale? Formulate and Solve using Python.

2. Kiran owns a petroleum company, which consists of two refineries.Refinery 1 costs $32,000 per day to operate, and it can produce 455 barrels of high-grade oil, 280 barrels of medium-grade oil, and 232 barrels of low-grade oil each day. Refinery 2 is newer and more modern. It costs $40,000 per day to operate, and it can produce 350 barrels of high-grade oil, 438 barrels of medium-grade oil, and 522 barrels of low-grade oil each day. The company has orders totaling 25,625 barrels of high-grade oil, 24,992 barrels of medium-grade oil, and 29,568 barrels of low-grade oil. How many days should it run each refinery to minimize its costs and still refine enough oil to meet its orders? Formulate the problem and solve using Python.