1. If the ages of Ram, Shyam and Ajay are input through the keyboard,

write a program to determine the youngest of the three.

2. Write a program that converts percentages to one of the following letter grades:

A (90 – 100%), B (80 – 89%), C (70 – 79%), D (60 – 69%), F (0 – 59%).

3. A five-digit number is entered through the keyboard. Write a program to obtain the reversed number and to determine whether the original and reversed numbers are equal or not.

4. A certain grade of steel is graded according to the following conditions:

(i) Hardness must be greater than 50

(ii) Carbon content must be less than 0.7

(iii) Tensile strength must be greater than 5600

The grades are as follows:

Grade is 10 if all three conditions are met

Grade is 9 if conditions (i) and (ii) are met

Grade is 8 if conditions (ii) and (iii) are met

Grade is 7 if conditions (i) and (iii) are met

Grade is 6 if only one condition is met

Grade is 5 if none of the conditions are met

5. Write a program, which will require the user to give values of hardness, carbon content and tensile strength of the steel under consideration and output the grade of the steel.

6. If the three sides of a triangle are entered through the keyboard, write a program to check whether the triangle is isosceles, equilateral, or right angled triangle.

7. Little Bob loves chocolate, and he goes to a store with Rs. N in his pocket. The price of each chocolate is Rs. C. The store offers a discount: for every M wrappers he gives to the store, he gets one chocolate for free. This offer is available only once. How many chocolates does Bob get to eat?

Note: The values for N, C, M are user-defined

8. An university is setting up a new lab at their premises. Design an algorithm and write Python code to determine the approximate cost to be spent for setting up the lab. Cost for setting the lab is sum of cost of computers, cost of furniture and labour cost. Use the following formulae for solving the problem:

Cost of computer = cost of one computer \* number of computers

Cost of furniture = Number of tables \* cost of one table + number of chairs \* cost of one chair

Labour cost = number of hours worked \* wages per hour

Note: The values to the variables should be directly given in the program.

9. A leap year is a calendar year containing an additional day added to keep the calendar

year synchronized with the astronomical or seasonal year. In the Gregorian calendar,

each leap year has 366 days instead of 365, by extending February to 29 days rather

than the common 28. These extra days occur in years which are multiples of four (with

the exception of centennial years not divisible by 400). Write a Python program, which

asks for a year and calculates, if this year is a leap year or not.