

Computer Programming Lab (CS104L)

Lab1

- Q1. Take two numbers as user input and print the maximum number.
- Q2. Take any number as user input and print whether it is an even number or odd.
- Q3. Read names of two students and print them in alphabetical order.
- Q4. Write a python program to calculate the time required for a car to traverse 5 km starting from rest with acceleration 30 m/s^2 . Print the output with proper units.
- Q5. You have three ropes each being 10m long. You use the ropes to make a circle, a regular hexagon and an equilateral triangle. Determine the area of each of these figures.
- Q6. The perimeter of a circle, square and an equilateral triangle is the same and is taken from the keyboard. Calculate the area of these three.
- Q7. A 30 kg boulder was initially moving at a velocity of 10 m/s, in order to stop it 10 N of constant retarding force is applied on it. After how long will the boulder stop?

Given,

$$m = 30 \text{ kg.}$$

$$\text{Retarding force} = -10\text{N}$$

$$u = 10 \text{ m/s}$$

$$v = 0$$

We know,

$$F = ma$$

$$-10 = 30 \times a$$

$$a = -1/3 \text{ ms}^{-2}$$

Also,

$$v = u + at$$

$$0 = 10 - t/3$$

Therefore,

$$t = 30 \text{ s}$$