

Question 1

Write a C program that calculates the cost for your grocery shopping. There are only apples, bananas and carrots available on the grocery store and you can only buy one of them at a time. The program will first ask you what type of fruit you would like to have. User will enter 'a' for apples, 'b' for bananas and 'c' for carrots. (You will read a character from user. Note that you should print "Invalid character choice." if user enters something other than a,b or c.) Then program will asks how many of that item user would like to buy. User will enter a integer indicating the number of items. The program should calculate and print the cost of items. The cost of fruits per item are as follows. Apple 10 cent, Banana: 12 cent, Carrot: 7 cent.

- a. Use if statement
- b. Use switch-case statements

Question 2

A circle is represented by a equation $(x-a)^2+(y-b)^2=r^2$ where a, b represent the center point coordinates and r is the radius of the circle. Write a program to input a, b, and r and and x,y coordinates of point P and check if the point is on the circle, in the circle or outside the circle.

Question 3

Write a C program that the user inputs the value of kilowatt (kw) and selects one of the other power units which are horsepower (hp), foot-pound (fp), gigawatt (gw) and megawatt (mw). If user enters 'h', then value of kilowatt should be converted to horsepower, or if user enters 'f', then value of kilowatt should be converted to foot-pound, or if user enters 'g', then value of kilowatt should be converted to gigawatt, or if user enters 'm', then value of kilowatt should be converted to megawatt. At the end of the program, the result which is converted to selected power unit should be printed on the screen. 1 kw = 1.34 hp, 1 kw = 1000 fp, 1 kw = 0.0001 gw, 1 kw = 0.001